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Technical Note N-482

PIONEER POLAR STRUCTURES
SPECIFICATIONS FOR JAMESWAY SHELTER ACCESSORIES

15 April 1963

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PORT HUNTERS, CALIFORNIA

NO O.TS

**PIONEER POLAR STRUCTURES
SPECIFICATIONS FOR JAMESWAY SHELTER ACCESSORIES**

**Y-F015-11-146
Type B**

Compiled by

G. E. Sherwood

ABSTRACT

Accessories were developed for improving the Jamesway in order to provide a suitable, lightweight, quick-erecting shelter for use as quarters, messing, galley, utilities, administration and other such applications in pioneer polar camps. These accessories include: A heavy duty floor and foundation system; a wall extension kit; special entry kits; an improved electrical distribution system; and special utility accessories. This technical note contains the specifications for the Jamesway shelter accessories presented in the Naval Civil Engineering Laboratory Technical Report TR-241, "Pioneer Polar Structures - Accessories for the Jamesway Shelter."

INTRODUCTION

Experience has shown that a warm, comfortable shelter for use as quarters, messing, galley, utilities, administration and medical care is required for efficient and effective performance of a work force in a polar environment. Shelters for use when pioneering these regions must be lightweight and quick-erecting. Based on fulfillment of the above requirements and several years of successful use in Arctic and Antarctic operations, the Army Quartermaster Corps Tent, frame-type, insulated, commonly known as the Jamesway, was selected as the basic building to be used for development of a suitable shelter for pioneer polar camps.¹ Although the Jamesway basically fulfills the requirements of shelters for pioneer polar operations, continued usage of the structure has revealed certain limitations. This technical note contains the specifications* for² accessories developed for the Jamesway to overcome these limitations.

DESCRIPTION OF THE ACCESSORIES

The accessories developed for the Jamesway are detailed in the drawings contained in the Appendix. Accessories developed are:

1. A heavy duty floor which supports large concentrated loads without excessive deflection. Y&D Drawing No. 936916.
2. A special foundation system which provides structural steel support under the center of a building where cavitation is most critical. Y&D Drawing No. 936916.
3. A wall extension kit which raises the roof arches two feet above the standard position providing adequate headroom along the edges of the building. Y&D Drawing Nos. 936903 through 936905.
4. A side entry kit which is an entry vestibule for the side of a building. Y&D Drawing Nos. 936907 through 936912.
5. A standard vestibule end entry kit which permits direct entry through a standard vestibule. Y&D Drawing No. 936913.
6. An improved electrical distribution system which provides adequate lighting and convenience outlets for general use and flexibility for special applications. Y&D Drawing No. 936906.

* Developed by King, Benioff and Associates, Consulting Engineers, Sherman Oaks, California under Contract NBy-32208.

7. Water storage tanks which permit elevated water storage. Y&D Drawing No. 936915.

8. A snow melter which can be supplied with snow and used inside a building. Y&D Drawing No. 936917.

9. A dry head kit which permits placement of a toilet inside a building. Y&D Drawing No. 936914.

10. A special roof vent which can be placed anywhere in a building. Y&D Drawing No. 936902.

SPECIFICATIONS FOR THE ACCESSORIES

The specifications in the following paragraphs apply as appropriate to the Jamesway shelter accessories.

1. Scope. The work shall include the furnishing of all material and equipment, and performing all labor for the complete fabrication of the items indicated on the drawings and described and specified herein. The contractor's proposal shall be based on the drawings and specifications herewith and no deviations shall be accepted except as approved in writing by the Contracting Officer.

2. Materials

A. Wood

(1) Lumber. (Referred to on drawings as "Wood"). All lumber shall thoroughly and uniformly be dried to a moisture content not more than 12 percent at time of fabrication determined in accordance with Specification MIL-W-6110, and shall be free from decay, case bordering, shakes, checks, or any other defect which may affect the strength, wear or serviceability of the member. Not more than two small round knots 1/4 to 1/2 inch in diameter or one 3/4 inch knot will be permitted per square foot. Members shall be finished on all sides to drawing dimensions. Any of the following species of wood may be used, unless otherwise specified:

Fir, Douglas, Coast Region
Hemlock, Western
Pine, Norway or Ponderosa
Pine, (White) Northern or Western
Spruce (Eastern, Sitka)
Pine, Southern (long leaf, slash, short leaf and loblolly)

(2) Plywood. Plywood shall conform to Specification NN-P-530a for all plywood, and shall be grade marked to indicate conformance with the following requirements.

(a) Douglas Fir, Exterior Type, Grade AC, sanded 2 sides, as per Commercial Standard CS-45 of latest date.

B. Steel

(1) Sheet or Strip. Conform to Specification QQ-S-640 FS-1020 unless noted otherwise.

(2) Bar stock. Conform to Specification QQ-S-633a.

(3) Structural. Conform to "Standard Specifications for Structural Steel for Bridges and Buildings," Serial Designation A-7 of the American Society for Testing Materials.

C. Aluminum

(1) For structural purposes. Alloy 6061 or 6062, T-6 Temper, conform to Specification QQ-A-270a. Alloy and use as indicated on the drawings.

(2) For tanks. Alloy 5052, zero Temper, conform to Specification QQ-A-318c. Alloy and use as indicated on the drawings.

(3) Welding Wire. 5154 or 5356 for Alloys 6061 and 6062; 5356 for Alloy 5052.

(4) For vent roof flashing. Conform to Specification MIL-A-52174, .025 inches thick.

D. Fastenings

(1) Nails. The nails shall be steel, cement coated, either standard (coolers) or countersunk head (sinkers) and size as indicated on the drawings, and shall conform to Specification FF-N-105.

(2) Screws

(a) Wood. Wood screws shall be steel, of the size indicated on the drawings and of style 2c (Flat (countersink) head with cross recess drive) and shall conform to Specification FF-S-111b. Wood screws shall be used only where length requirements are in excess of two (2) inches.

(b) Screws, threaded full length. All screws screwing wood to wood or other materials to wood and where the length requirement is not in excess of two (2) inches shall be a type of screw that is threaded full length. These screws shall be cadmium plated with cross recess drive and head type as indicated on the drawings. Type A, Parker Kalon, cadmium plated screws with Phillips slot conforms to these requirements.

(3) Fasteners, Corrugated. Corrugated fasteners shall be standard commercial of size indicated on the drawings.

(4) Bolts, nuts, washers

(a) Bolts, carriage, square neck, and nuts. Conform to Type C-2 Table X, of Specification FF-B-571a, and nuts Type A1 and Table XII.

(b) Bolts, and nuts, hexagonal. Conform to Specification FF-B-571a, Type B1 and Table V and nuts Type A1 and Table XII.

(c) Nuts, wing. The wing nuts shall be standard commercial, of the type and size as indicated on the drawings.

(d) Washers. The washers shall be standard commercial cut steel of the type and size indicated on the drawings.

(e) Finishes. All bolts, nuts, and washers shall be finished with a zinc coating conforming to type II or III, class 2 of Specification QQ-Z-325a or cadmium plating type II or III, class 2 of Specification QQ-P-416a.

(5) Rivets. Rivets for attaching metal to wood shall be standard commercial, of type and size as indicated on the drawings and finished the same as specified for bolts in Section (D) (4) (e).

(6) Adhesive A - wood to wood. The adhesive used for adhering wood to wood (other than the manufacture of plywood) shall conform to Type I, Grade A Class 1 of Specification MIL-A-397B.

E. Insulation

(1) Blanket. The insulation material shall be composed of glass fibers firmly bonded with a thermo-setting plastic resin into a mat structure of thickness as indicated on the drawings, (plus 1/2 inch, minus 0), with a density of 1# per cubic foot plus or minus 10 percent. The blanket shall be faced on each face with bright aluminum foil, 2 mils thick, and applied with a fire retardant adhesive. The thermal

conductivity shall not exceed 0.25 B.T.U. per hour, per square foot, per degree Fahrenheit taken at a mean temperature of 70 F; when tested in accordance with the ASTM Specification D 1518-57T.

(2) Felt. Gaskets indicated as felt shall be composed of a wool felt, specially impregnated with an anti-corrosion and anti-electrolysis compound. It shall have a tacky, pressure sensitive adhesive on one side as an application aid. Size shall be as indicated on the drawings.

F. Straps

(1) Webbing, cotton. The webbing for straps shall conform to Specification MIL-W-530B and shall be Type III, Class 4 of width indicated on the drawings. Webbing shall be dyed to olive drab shade No. 7.

(2) Clips, end. The end clips on webbing straps shall be brass, black chemical finish conforming to type I, (ball type) of Specification JAN-C-496.

(3) Buckles, slide, with hook. The buckles shall be made of steel, hot rolled sheet or strip, condition optional as indicated on the drawings. The buckle shall be heat treated to a hardness of RC-16-22 and shall be free from cracks, scale, and other injurious defects. Case hardening will not be permitted. The buckles shall be given a finish consisting of a phosphate treated zinc-plate, conforming to Class 3, Type III of Specification QQ-Z-325, followed by bake enameling. The enamel shall conform to Type II, Specification JAN-E-480, in a black color. The coatings shall level out to a uniform dry film thickness of 0.25 mils minimum, without objectionable orange peel, wrinkles, drops, streaks, or areas of thin or no film.

G. Coating

(1) Galvanizing. Conform to Specification QQ-Z-325a, Type II, Class I zinc coating.

(2) Cadmium Plating. Conform to Specification QQ-P-416a, Class I, Type II.

H. Paint

(1) Primer. The primer shall conform to Specification TT-P-636b.

(2) Enamel. The enamel shall conform to Specification TT-E-529a, Class A. The color shall be No. 24087, Table VI of Standard FED-STD-595.

J. Hardware

(1) Hinges. All hinges shall conform to Specification FF-H-116c of the following types and sizes as indicated on the drawings.

Doors - type 2171H
Tie down assembly bar - Straps hinge, type 2203
Dry Head Lid - Tee hinges, type 2209
Dry Head Access Door - Type 2203, 4" strap
Snow Melter Chute - Type 2203, 4" strap

(2) Latch and Keeper. Latch and keeper for doors shall be a type easily operated from either inside or outside of the door. Latch and keeper shall be substantially the type indicated on the drawings, easily operated by a person wearing polar type mittens, but any acceptable latch that meets the necessary requirements, may be used upon the approval of the contracting officer. The Vonnegut No. 25 latch, as manufactured by Vonnegut Hardware Company, Indianapolis, Indiana, meets the requirements of this specification.

(3) Barrel bolt. Conform to Specification FF-H-111a, Type F1012C, 4 inches long.

(4) Sash fasteners. Conform to Specification FF-H-111a, Type F1142.

(5) Suitcase fasteners. Standard commercial as detailed, cadmium or zinc plated.

(6) Link lock. Medium duty, spring locking device. Load carrying capacity 1,000 pounds tension, operated by cam action with large wing-nut handle. (No. 2 Spring-Loaded Link-Lock as manufactured by Simmons Fastener Corporation, Albany, New York, conforms to this specification.)

(7) Chain bolt. Conform to Specification FF-H-111a, Type F 1023AC-6.

K. Toilet Seat

(1) Standard commercial, regular, solid wood core with plastic white finish, without cover.

L. Cloth

(1) For Vent Roof Flashing. A closely woven glass fabric coated on one side with chloroprene containing fire retardant. Material shall be resistant to acids, alkalies, gasoline and grease and will withstand a constant temperature of 250 F. (Ventglas, LA, manufactured by Ventfabrics, Inc., 640 North Kedzie Avenue, Chicago 12, Illinois, conforms to this specification.)

M. Plumbing Materials

(1) Pipe fittings - for steel pipe. Conform to Specification WW-P-521d.

N. Electrical Materials

(1) Materials listed below shall conform to Specifications as noted.

<u>Materials</u>	<u>Specification</u>
(a) Conduit outlets	W-C-586a
(b) Type VI, Design 27, Form 2	
(c) Wire connectors	W-S-610
Types I, Class B Style 3 or 4, Type II, Class A	
(d) Fittings, cable and conduit	W-F-406a
Type I Class 1, Style A; Type I, Class 3, Style A; Type V, Class 1, Style A.	
(e) Outlet Boxes	W-J-800a
Type I Size A Style 1; Type I, Size C, Style 8;	

Materials

Specification

Type II, Size E,
Style 13;
Type II, Size G,
Style 18;
Type IV Size K
Style 29;
Type VIII, Size S,
Style 43;
Type VIII, Size S
Style 44;
Type VIII, Size U,
Style 52, 54, 56, 57, 58;
Type VIII, Size S,
Style 49

(f) Panel Boards

WW-P-131a(2)

Class A-1, A-2, and A-4
as indicated on drawings
and conform to Table III.

(g) Receptacles and Plugs

W-C-596

Style, Series D except
with pressure type
terminals.

**(h) Switches,
(surface mounted)**

W-S-865c

Type NDD, Design 4, Box 1

(i) Switches, toggle

W-S-896a

Table III, Style 62

(j) Conduit, Steel, flexible

WW-C-566a

Sizes as indicated

(k) Conduit, steel, rigid

WW-C-581c

Sizes as indicated

Materials

Specification

(1) Nipples

WW-C-351a

Type 1, sizes as indicated

(m) Tubing, metallic

WW-T-806b

Sizes as indicated

(2) Conductors

(a) Conductors in buildings shall be copper, of size indicated, color coded; insulation to be of a type to withstand bending at -50 F without damage.

(3) Lighting Fixtures. Conform to Specification 9Yg.

3. Jamesway Wall Extension Kits (Y&D Drawings 936903, 936904 and 936905)

(a) The Wall Extension Kits consist of prefabricated, insulated plywood panels two feet (2') high of length indicated used for increasing the head room of the Jamesway Structure by two feet (2'). Included in the kit is the necessary material for modification of the end walls. The side and end wall panels connect to the floor units by means of bolts and link-lock fasteners. The end walls must be modified in the field in accordance with the drawings. Separate kits are listed for 32' long and 48' Jamesway Structures.

(b) Fabrication. All panels and items for end wall modification shall be fabricated in accordance with the drawings. Materials to conform to paragraph 2. All joints, wood to wood, and plywood to wood, shall be nail-glued with Adhesive A. All exposed surfaces of wood and plywood and all surfaces of steel shall receive one coat of Primer and two (2) coats of Enamel.

4. Jamesway General Electrical (Y&D Drawing 936906)

(a) The General Electrical plan provides a general lighting system with convenience outlets on each fixture. Separate designs are indicated for the 32' long and 48' long Jamesway Structure. This electric system is included as part of the Basic Building indicated on Y&D Drawing 936902.

(b) Fabrication. Materials to conform to paragraph 2-N. Assemblies shall be shop assembled with all parts as indicated and with wire ends cleaned ready for connecting.

5. Jamesway Side Entry Kit - For use with wall extensions (Y&D Drawing 936907, 936908, 936909)

(a) The Side Entry Kit provides a method of entering the Jamesway Structure along either side. It fits between arches and makes a vestibule with outer and inner doors. A four foot (4') long wall extension panel is furnished to replace one of the standard wall extension panels.

(b) Fabrication. Materials to conform to Paragraph 2. All joints, wood to wood, and plywood to wood, shall be nail-glued with Adhesive A. All exposed surfaces of wood and plywood, steel and hardware, shall receive one (1) coat of Primer and two (2) coats of Enamel.

6. Jamesway Side Entry Kit - For use with standard unit (Y&D Drawing 936910, 936911, 936912)

(a) The Side Entry Kit provides a method of entering the Standard (without wall extension) Jamesway Structure on either side. It fits between arches and makes a vestibule with outer and inner doors.

(b) Fabrication. Materials to conform to Paragraph 2. All joints, wood to wood, and plywood to wood, shall be nail-glued with Adhesive A. All exposed surfaces of wood and plywood, steel and hardware, shall receive one (1) coat of Primer and two (2) coats of Enamel.

7. Jamesway Vestibule End Entry Kit (Y&D Drawing 936913)

(a) The Vestibule End Entry Kit provides a door in the end of the standard vestibule. The kit consists of a frame and door, all assembled, ready for installation.

(b) Fabrication. Materials to conform to Paragraph 2. All joints, wood to wood and plywood to wood, shall be nail-glued with Adhesive A. All exposed surfaces of wood, plywood, steel and hardware shall receive one (1) coat of Primer and two (2) coats of Enamel.

8. Jamesway Dry Head Kit (Y&D Drawing 936914)

(a) The Dry Head Kit is used in conjunction with a Jamesway Side Entry Kit to provide a toilet stall. It is furnished in a "knock-down" condition and must be assembled in the field. It is so arranged that the waste can be removed from the exterior of the building.

(b) Fabrication. Materials to conform to Paragraph 2. All shop fabricated joints, wood to wood and wood to plywood, shall be nail-glued with Adhesive A. All surfaces of wood, plywood, steel and hardware shall receive one (1) coat of Primer and two (2) coats of Enamel.

9. Jamesway Tanks and Supports (Y&D Drawing 936915)

(a) The Tanks and Supports provide a 190 gallon Water Storage Tank, with cover, and Tank Support.

(b) Water Storage Tanks shall be formed of aluminum in accordance with details. Joints shall be full butt welds, ground smooth. Edges of sheared sheets shall be ground smooth. Holes in tank for piping shall be reinforced as detailed. Materials to conform to Paragraph 2.

(c) The Tank Support shall be fabricated as detailed ready for field assembly, including all erection bolts. Materials to conform to Paragraph 2.

(d) Welding shall be by inert gas process.

10. Jamesway Special Foundations (Y&D Drawing 936916)

(a) The Special Foundation provides steel supports, for the floor units, spanning 16 feet (16') to continuous timber sills. Included with each Special Foundation is insulation material to be placed over the snow below the foundation members and vent pipes to prevent or delay cavitation by heat from the building. The Special Foundation is to be used under floor areas where excessive heat may be generated. Special Foundations are provided for 16', 32' and 48' long structures. They may be used under the entire building or only a portion of the length.

(b) The Strengthening Members (SM) are pre-cut 2 x 6's for strengthening standard floor units where excessive loads may occur. They are to be field installed.

(c) Fabrication - Steel Beams and Angles. Shall be fabricated in accordance with American Institute of Steel Construction Specification for the Design, Fabrication and Erection of Structural Steel for Bridges and Buildings.

Steel Joists shall be fabricated of the members indicated in accordance with the specifications of the Steel Joist

Institute. Wood sills require no fabrication. Vent Pipes shall be fabricated of galvanized steel of gage indicated. Seams shall be of the single grooved seam type. Parts shall be separate ready for field assembly. Strengthening Members shall be cut to dimensions indicated.

(d) Painting. All surfaces of steel and wood shall receive one (1) coat of Primer and two (2) coats of Enamel. Steel members shall be dipped.

11. Snow Melter Tank and Chute (Y&D Drawing 936917)

(a) The Snow Melter consists of a melting tank and chute. The tank is constructed of plywood, insulation and aluminum liner. Immersion type electric water heaters are used for melting snow. The chute is constructed of lumber and plywood and requires modification of the end wall of the Jamesway Structure for installation. The door frame in the end wall and the entire vestibule must be discarded. The chute, when raised, provides a closure for the new opening.

(b) The Tank, shall be fabricated of the materials and to the dimensions as indicated on the drawings. The aluminum liner shall fit snugly into the plywood box and be secured only at the top. Joints in liner shall be full butt welded and ground smooth. Sheared edges shall be ground smooth. Fittings for pipe outlet shall be installed as detailed. Materials to conform to Paragraph 2. Joints, wood to wood and wood to plywood, shall be screw-glued with Adhesive A. Exposed surfaces of wood or plywood shall receive one (1) coat of Primer and two (2) coats of Enamel.

(c) The Chute and End Wall Modification shall be fabricated of materials and to dimensions indicated on the drawings ready for field installation. Joints, wood to wood and plywood to wood, shall be screw-glued with Adhesive A. Exposed surfaces of all material, except felt, shall receive one (1) coat of Primer and two (2) coats of Enamel.

(d) Welding shall be by inert gas process.

REFERENCES

1. NCEL Technical Note N-422, Erection of Quarters Building for Pioneer Polar Camp, by R. W. Hansen, C. R. Hoffman and E. H. Moser. 26 September 1961.
2. NCEL Technical Report R-241, Pioneer Polar Structures - Accessories for the Jamesway Shelter, by G. E. Sherwood. Port Hueneme, California, to be published in June 1963.

APPENDIX

Drawings For The Jamesway Shelter Accessories

The original of the drawings listed below and shown at reduced scale are available at the Naval Civil Engineering Laboratory, Port Hueneme, California. All drawings are 28 by 40 inches.

<u>Y&D Drawing No.</u>	<u>Title</u>
936902	Jamesway Structure Basic Building
936903	Jamesway Wall Extension Kit Fabrication - Walls
936904	Jamesway Wall Extension Kit Fabrication - Door Frame
936905	Jamesway Wall Extension Kit Erection Details
936906	Jamesway General Electrical 32' and 48' Buildings
936907	Jamesway Side Entry Kit (For use with wall extensions) Fabrication Details
936908	Jamesway Side Entry Kit (For use with wall extensions) Fabrication Details
936909	Jamesway Side Entry Kit (For use with wall extensions) Erection Details
936910	Jamesway Side Entry Kit (For use with standard unit) Fabrication Details
936911	Jamesway Side Entry Kit (For use with standard unit) Fabrication Details

Y&D Drawing No.

Title

936912

Jamesway Side Entry Kit
(For use with standard unit)
Erection Details

936913

Jamesway Vestibule End Entry Kit
Fabrication and Erection Details

936914

Jamesway Dry Head Kit
Fabrication and Erection

936915

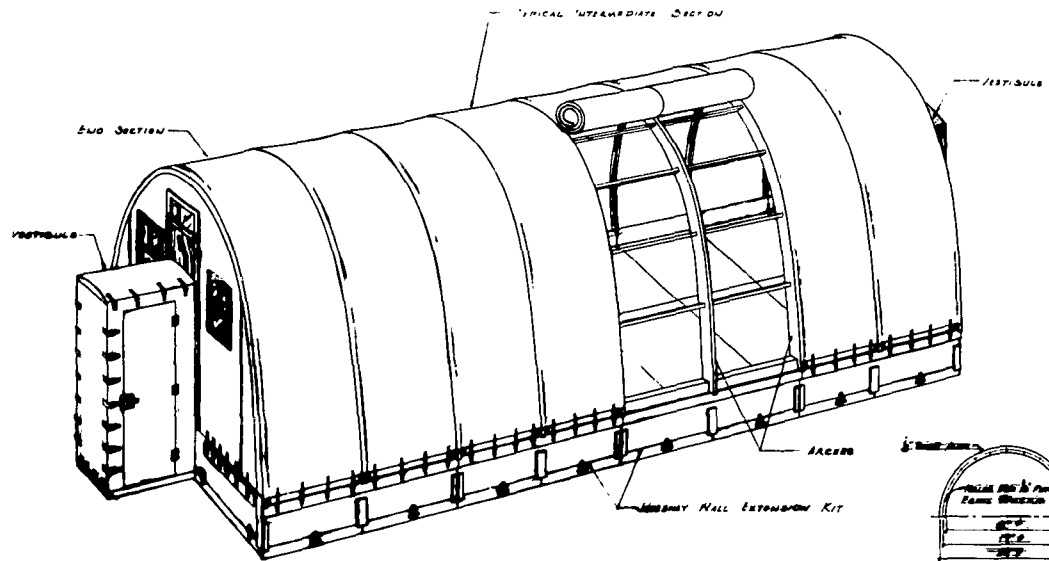
Jamesway Tanks and Supports
Fabrication and Erection

936916

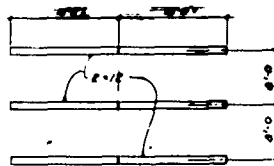
Jamesway Special Foundations
Fabrication and Erection

936917

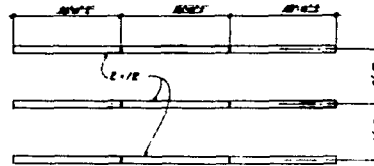
Snow Melter Tank and Chute
Fabrication and Erection



PERSPECTIVE (1 UNIT)

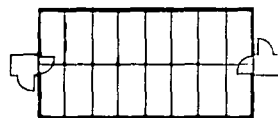


16' x 32' STRUCTURE

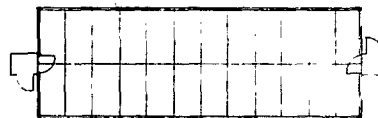


16' x 66' STRUCTURE

FOUNDATION PLANS

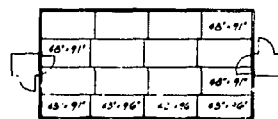


16' x 32' STRUCTURE



16' x 66' STRUCTURE

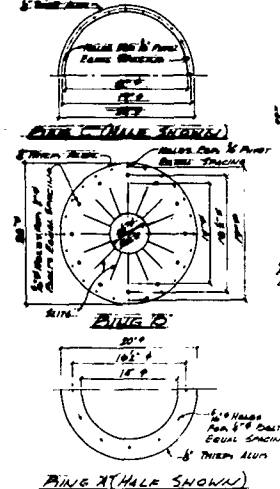
FLOOR PLAN PLANS



16' x 32' STRUCTURE

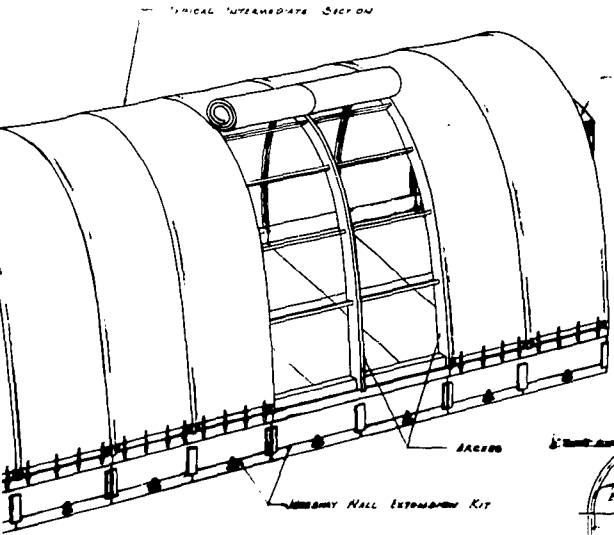


FLOOR PLAN



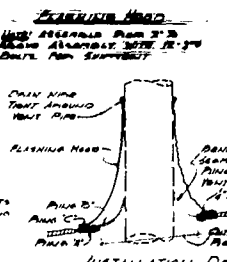
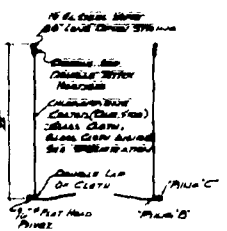
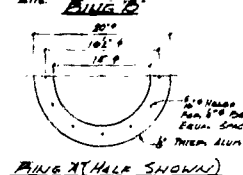
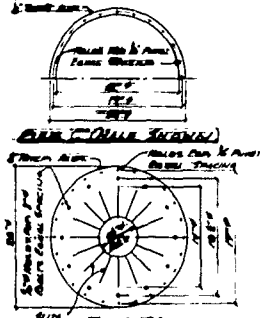
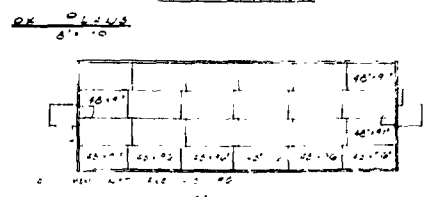
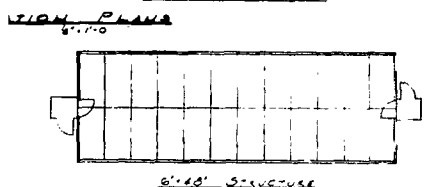
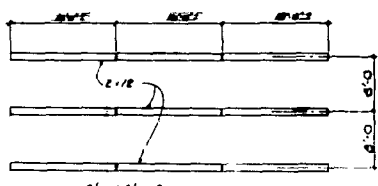
VENT P.O.

NOTE: THE TUNNEL IS NOT INCLUDED IN THE "BUILDING" ASSUMPTIONS. THE QUANTITY ASSUMED FOR EACH IS BASED ON GENERAL ASSUMPTIONS OF 100' TO 125' TUNNEL PER UNIT.



2

PERSPECTIVE (1 UNIT)



VENT ROOF FLASHING

NOTE: THIS ITEM IS NOT INCLUDED IN THE BASIC BUILDING. ANCHORING CHAINS MUST BE INSTALLED. ANCHORS MUST BE INSTALLED IN THE CONCRETE. ANCHORS MUST BE INSTALLED IN THE CONCRETE. ANCHORS MUST BE INSTALLED IN THE CONCRETE.

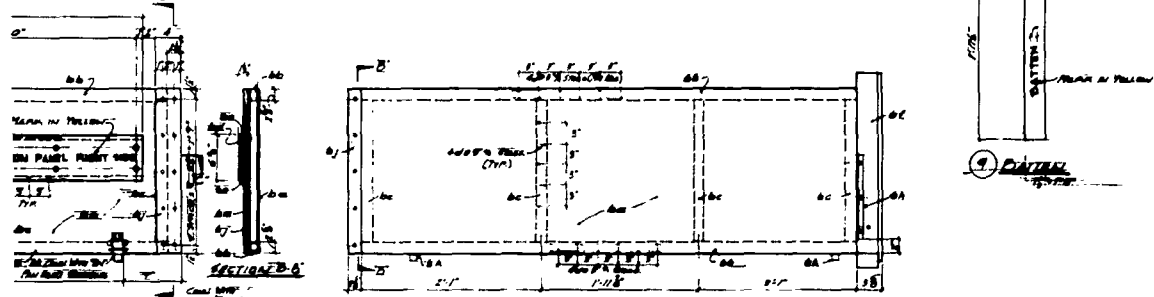
REFER TO HCL 11 FOR ADDITIONAL INFORMATION AND SPECIFICATION

U.S.	DESCRIPTION	UNIT	QUANTITY	STOCK NO.	DATE
16.02	BASIC BUILDING				
1	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0001	2
2	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0002	6
3	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0003	2
4	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0004	9
5	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0005	1
6	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0006	1
7	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0007	1
8	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0008	1
9	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0009	1
10	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0010	1
11	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0011	1
12	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0012	1
13	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0013	1
14	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0014	1
15	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0015	1
16	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0016	1
17	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0017	1
18	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0018	1
19	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0019	1
20	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0020	1
21	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0021	1
22	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0022	1
23	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0023	1
24	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0024	1
25	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0025	1
26	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0026	1
27	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0027	1
28	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0028	1
29	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0029	1
30	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0030	1
31	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0031	1
32	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0032	1
33	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0033	1
34	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0034	1
35	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0035	1
36	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0036	1
37	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0037	1
38	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0038	1
39	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0039	1
40	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0040	1
41	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0041	1
42	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0042	1
43	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0043	1
44	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0044	1
45	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0045	1
46	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0046	1
47	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0047	1
48	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0048	1
49	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0049	1
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51	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0051	1
52	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0052	1
53	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0053	1
54	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0054	1
55	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0055	1
56	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0056	1
57	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0057	1
58	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0058	1
59	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0059	1
60	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0060	1
61	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0061	1
62	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0062	1
63	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0063	1
64	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0064	1
65	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0065	1
66	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0066	1
67	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0067	1
68	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0068	1
69	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0069	1
70	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0070	1
71	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0071	1
72	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0072	1
73	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0073	1
74	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0074	1
75	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0075	1
76	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0076	1
77	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0077	1
78	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0078	1
79	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0079	1
80	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0080	1
81	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0081	1
82	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0082	1
83	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0083	1
84	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0084	1
85	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0085	1
86	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0086	1
87	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0087	1
88	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0088	1
89	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0089	1
90	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0090	1
91	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0091	1
92	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0092	1
93	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0093	1
94	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0094	1
95	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0095	1
96	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0096	1
97	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0097	1
98	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0098	1
99	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0099	1
100	16' x 66' INTERMEDIATE COMPLETE	EA	1	1600-011-0100	1

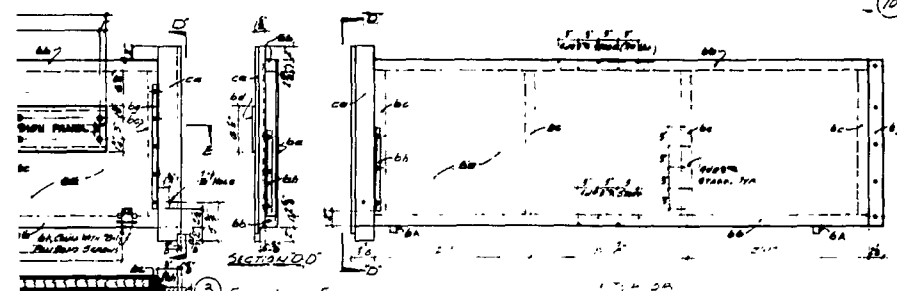
DEPARTMENT OF THE NAVY
U.S. NAVAL CIVIL ENGINEERING LABORATORY
KING, BENIOFF & ASSOCIATES
PIONEER POLAR STRUCTURES
JAMESWAY STRUCTURE
BASIC BUILDING
DATE 10/62
SCALE AS NOTED
T.O. 3000-10-220002



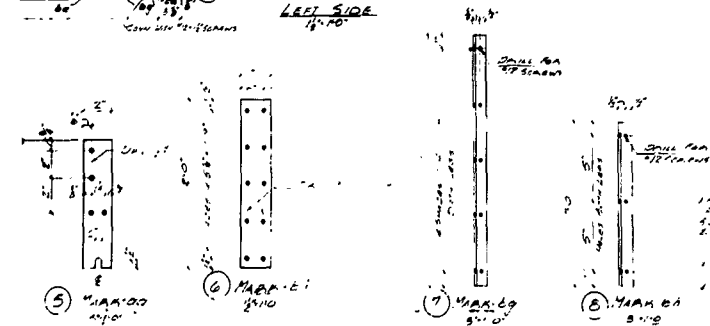
① SIDEWALL EXTENSION PANEL
16' x 10'



② END WALL EXTENSION PANEL
RIGHT SIDE
1550'



③ END WALL EXTENSION
LEFT SIDE



Y & D DRAWING NO. 938904
Y & D DRAWING NO. 938905
OTHER SHEETS INVOLVED

REFER TO NCCL TR _____ FOR ADDITIONAL
INFORMATION AND SPECIFICATION

GRAPHIC SCALE
SUBMITTED BY: EMB. SCHOFF & ASSOCIATES
Harold E. Schoff
DESIGNER
DATE: 10-2-78

U.S. NAVAL CIVIL ENGINEERING

No.	Description	Quantity	Unit	Remarks
1	Steel Plate	100	Sq. Ft.	
2	Steel Plate	100	Sq. Ft.	
3	Steel Plate	100	Sq. Ft.	
4	Steel Plate	100	Sq. Ft.	
5	Steel Plate	100	Sq. Ft.	
6	Steel Plate	100	Sq. Ft.	
7	Steel Plate	100	Sq. Ft.	
8	Steel Plate	100	Sq. Ft.	
9	Steel Plate	100	Sq. Ft.	
10	Steel Plate	100	Sq. Ft.	
11	Steel Plate	100	Sq. Ft.	

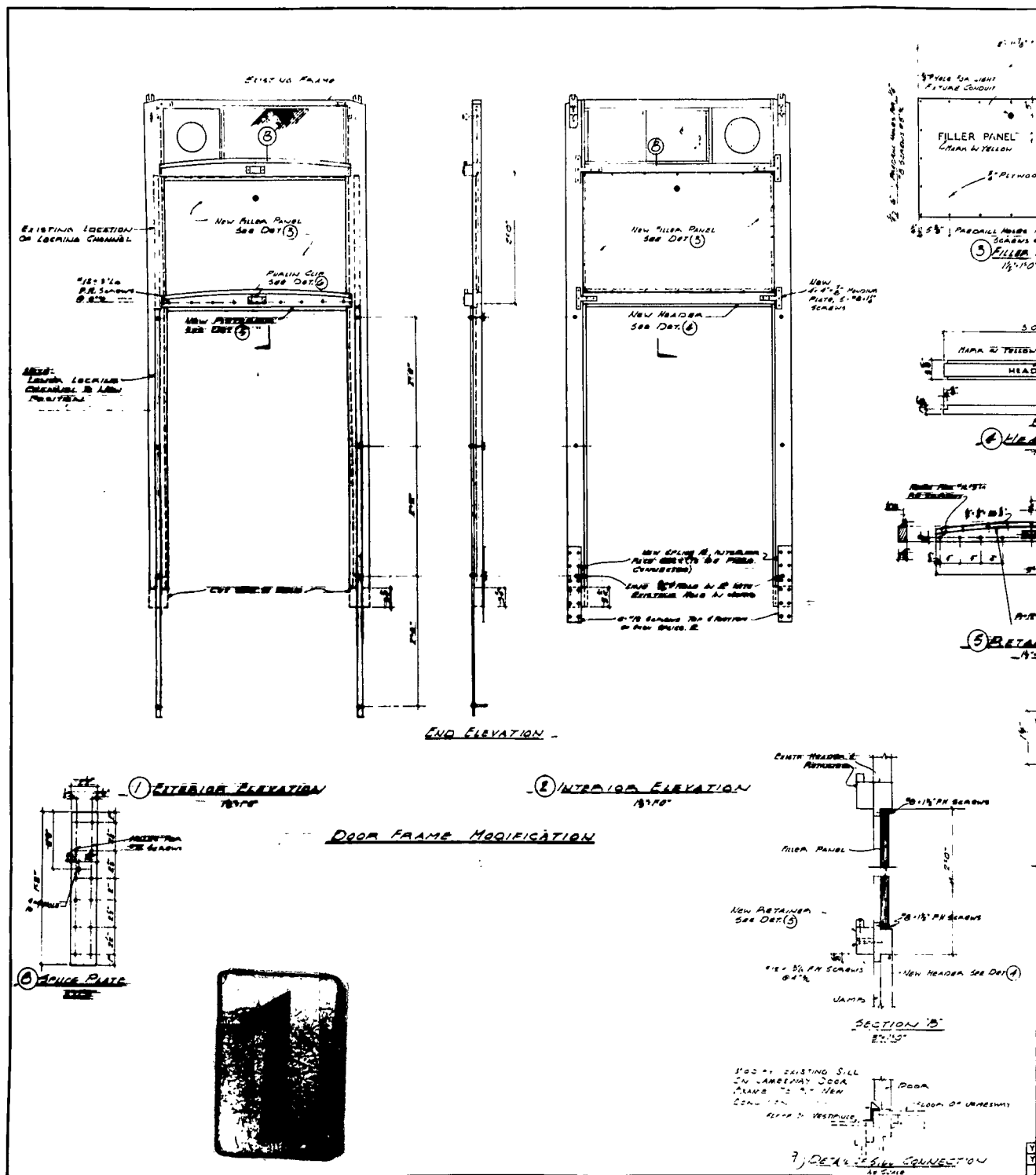
END WALL EXTENSION WALL, ALONG	SIDE	
12	Steel Plate	100
13	Steel Plate	100
14	Steel Plate	100
15	Steel Plate	100
16	Steel Plate	100
17	Steel Plate	100
18	Steel Plate	100
19	Steel Plate	100
20	Steel Plate	100
21	Steel Plate	100
22	Steel Plate	100
23	Steel Plate	100

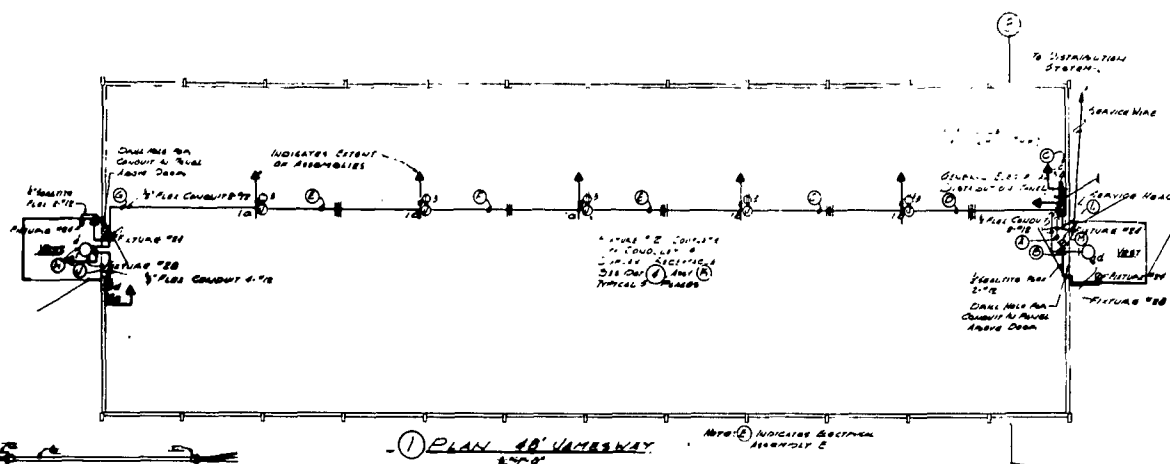
END WALL EXTENSION WALL, LEFT SIDE	SIDE	
24	Steel Plate	100
25	Steel Plate	100
26	Steel Plate	100
27	Steel Plate	100
28	Steel Plate	100
29	Steel Plate	100
30	Steel Plate	100
31	Steel Plate	100
32	Steel Plate	100
33	Steel Plate	100
34	Steel Plate	100

WALL COLLIMATIONS		
35	Steel Plate	100
36	Steel Plate	100
37	Steel Plate	100

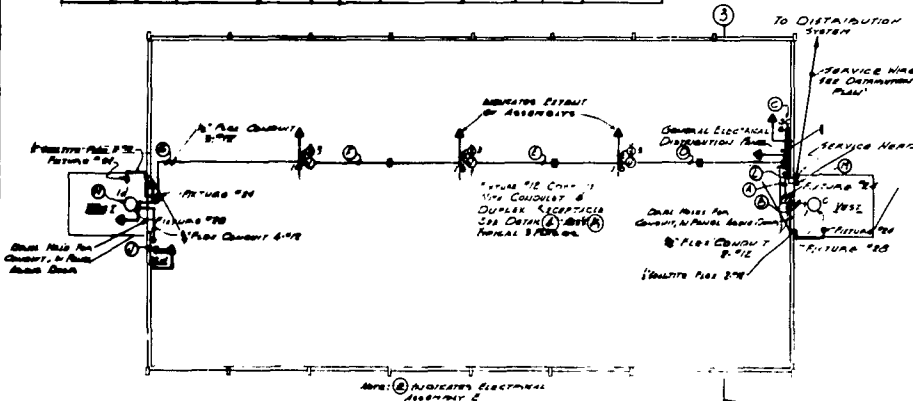
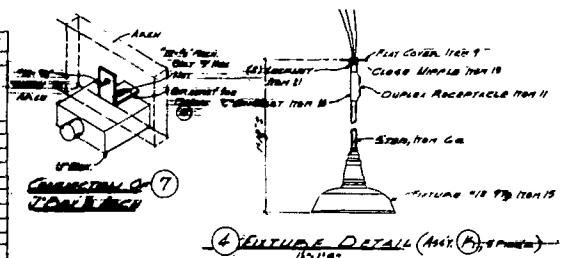
6. CONTRACTING SCHEMATIC DESIGNATION OF WALLS IS NOT
PERIOD FOR EXAMINATION WITH ALLEGEDLY THE PROVISION
LAW

DEPARTMENT OF THE NAVY		U.S. NAVAL CIVIL ENGINEERING		OFFICE OF LANCE AND SHIPS	
POST NAME		LABORATORY		CALIFORNIA	
KING, BENNETT & ASSOCIATES		CONSULTING ENGINEERS		SAN FRANCISCO, CALIFORNIA	
PIONEER POLAR STRUCTURES					
JAMESWAY WALL EXTENSION KIT					
FABRICATION - WALLS					
APPROVED FOR BUREAU OF WORKS		SCALE 2 OF 10		DATE	
APPROVED		NOTED SPEC		DATE	
FOR CHECK OF BUREAU		SHEET 2 OF 10		T & B DRAWING NO 838903	



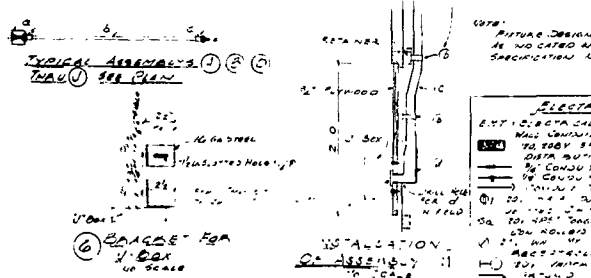


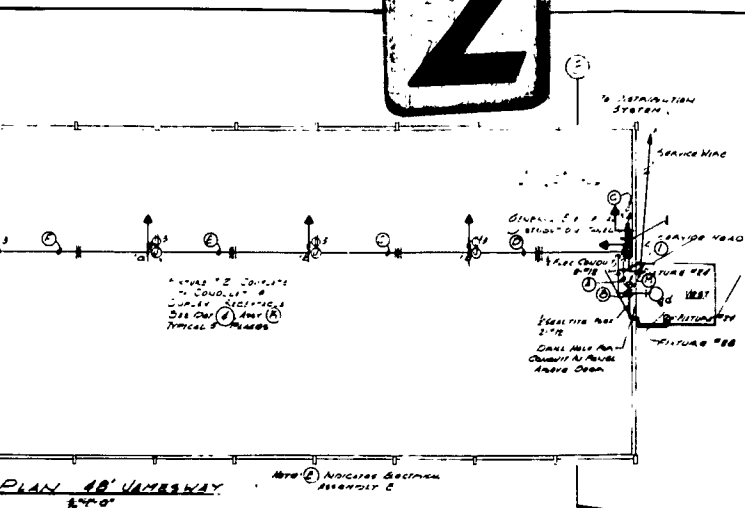
- ① PLAN 40' VARIWAY

[illegible]

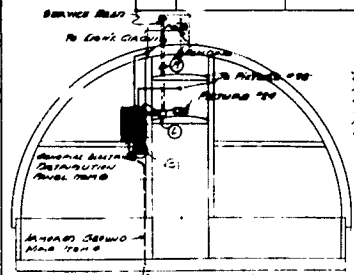
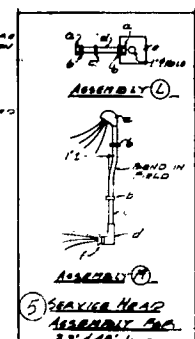
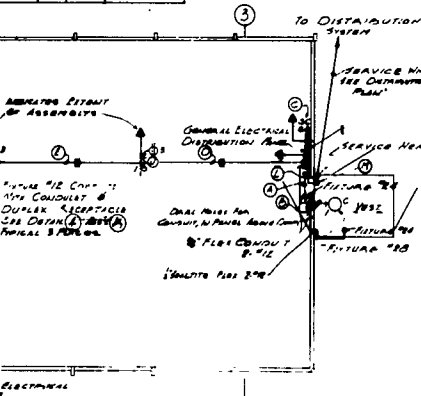
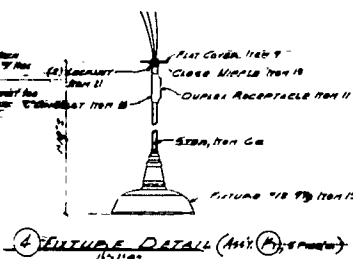
② PLAN 32' JAMESWAY
E. 110°

Station	Alt	Lat	Long	Time	Station	Alt	Lat	Long	Time	Station	Alt	Lat	Long	Time
(1)	1	m	2.52		(2)	1	m	2.52		(3)	1	m	2.52	
			2.52					2.52					2.52	
			2.52					2.52					2.52	
(4)	1	m	2.52		(5)	1	m	2.52		(6)	1	m	2.52	
			2.52					2.52					2.52	
			2.52					2.52					2.52	
(7)	1	m	2.52		(8)	1	m	2.52		(9)	1	m	2.52	
			2.52					2.52					2.52	
			2.52					2.52					2.52	
(10)	1	m	2.52		(11)	1	m	2.52		(12)	1	m	2.52	
			2.52					2.52					2.52	
			2.52					2.52					2.52	
(13)	1	m	2.52		(14)	1	m	2.52		(15)	1	m	2.52	
			2.52					2.52					2.52	
			2.52					2.52					2.52	
(16)	1	m	2.52		(17)	1	m	2.52		(18)	1	m	2.52	
			2.52					2.52					2.52	
			2.52					2.52					2.52	
(19)	1	m	2.52		(20)	1	m	2.52		(21)	1	m	2.52	
			2.52					2.52					2.52	
			2.52					2.52					2.52	
(22)	1	m	2.52		(23)	1	m	2.52		(24)	1	m	2.52	
			2.52					2.52					2.52	
			2.52					2.52					2.52	
(25)	1	m	2.52		(26)	1	m	2.52		(27)	1	m	2.52	
			2.52					2.52					2.52	
			2.52					2.52					2.52	
(28)	1	m	2.52		(29)	1	m	2.52		(30)	1	m	2.52	
			2.52					2.52					2.52	
			2.52					2.52					2.52	
(31)	1	m	2.52		(32)	1	m	2.52		(33)	1	m	2.52	
			2.52					2.52					2.52	
			2.52					2.52					2.52	
(34)	1	m	2.52		(35)	1	m	2.52		(36)	1	m	2.52	
			2.52					2.52					2.52	
			2.52					2.52					2.52	
(37)	1	m	2.52		(38)	1	m	2.52		(39)	1	m	2.52	
			2.52					2.52					2.52	
			2.52					2.52					2.52	
(40)	1	m	2.52		(41)	1	m	2.52		(42)	1	m	2.52	
			2.52					2.52					2.52	
			2.52					2.52					2.52	
(43)	1	m	2.52		(44)	1	m	2.52		(45)	1	m	2.52	
			2.52					2.52					2.52	
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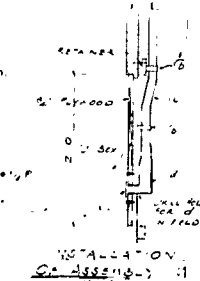
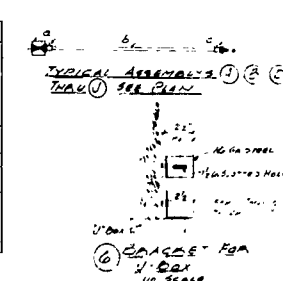
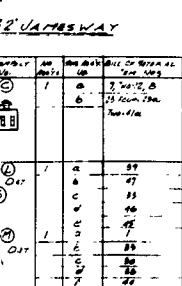
CONSTRUCTION - 7

[illegible]

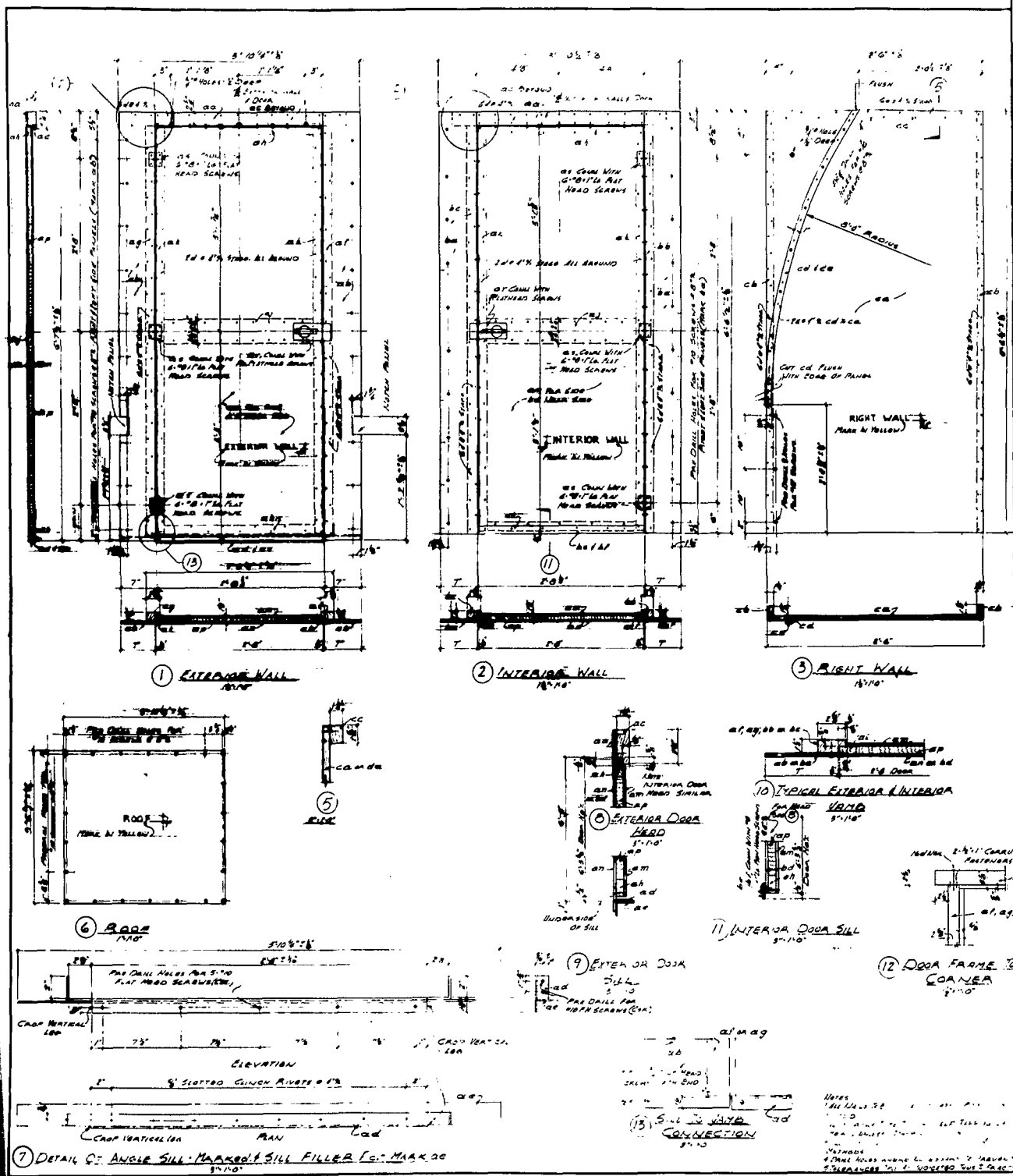
NOTE:
ALL WINE SEEMS TO BE AMERICAN WINE STAMPS.
NO RESERVATIONS IN HANNOVER. COL HAS 40
"COLLECT" BL. CHECK BL. 1/20
WINE
AT 400
YELLOW
THOSE AGAIN TO COLON OF ALLOCATION
ON WINE.

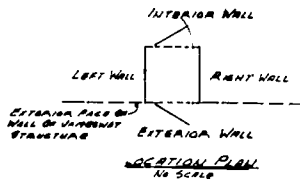
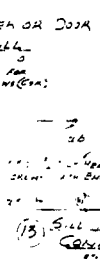
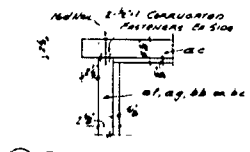
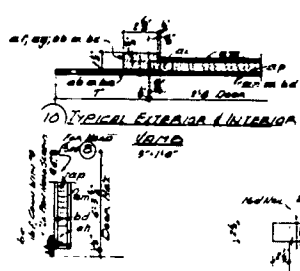
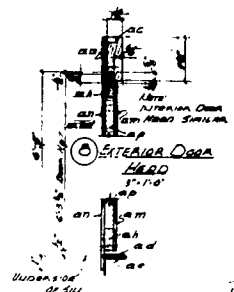
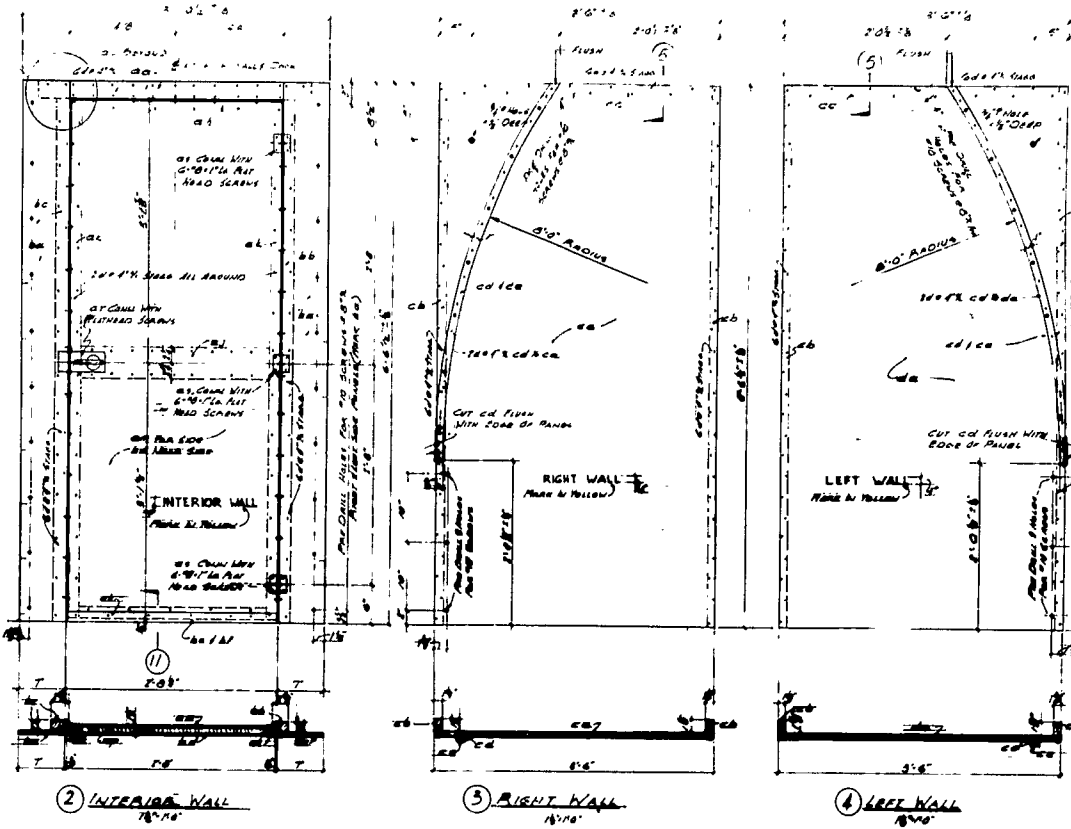
* REMARK COMMENT IN CARTON (100 PART OF APPROVALS)

NOTE: ALL SCENES ON THE 2nd. SELLING POINT. (BAGGAGE)
PLATED PAPER, ACCORDING TO THE BAGGAGE STAMP WAS
NOTED.

[illegible]

REFER TO INCL. TR. _____ FOR ADDITIONAL INFORMATION AND SPECIFICATION	SYMBOL	DESCRIPTION	DATE	APPROVED
		REVISONS		
DEPARTMENT OF THE NAVY	U.S. NAVAL CIVIL ENGINEERING LABORATORY		BUREAU OF TOWNS AND BRIDGES	
PORT NUMBER		CITY/STATE		
KING, BENIOFF & ASSOCIATES		CONSULTING ENGINEERS	BOSTON, MASS.	
DRAWING NO. 1 SHEET 1 OF 1 CHECKED BY SA DESIGNED BY SA TITLE SHEET DATE 1/25/54 DRAWN BY REV. NO. 1 DATE 1/25/54		PIONEER POLAR STRUCTURES JAMESWAY GENERAL ELECTRICAL 32' & 48' BUILDINGS		
GRAPHIC SCALE		APPROVED	DATE	
SUBMITTED BY KING, BENIOFF & ASSOCIATES 1/25/54		REVIEWED BY BUREAU OF TOWNS & BRIDGES 1/25/54		\$4.00
FOR CHIEF OF BUREAU		SHALL BE NOTED BY DATE 3 or 10		





REVISIONS		DATE	APPROVED
1	REVISION		
2	REVISION		
3	REVISION		
4	REVISION		
5	REVISION		
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100	REVISION		

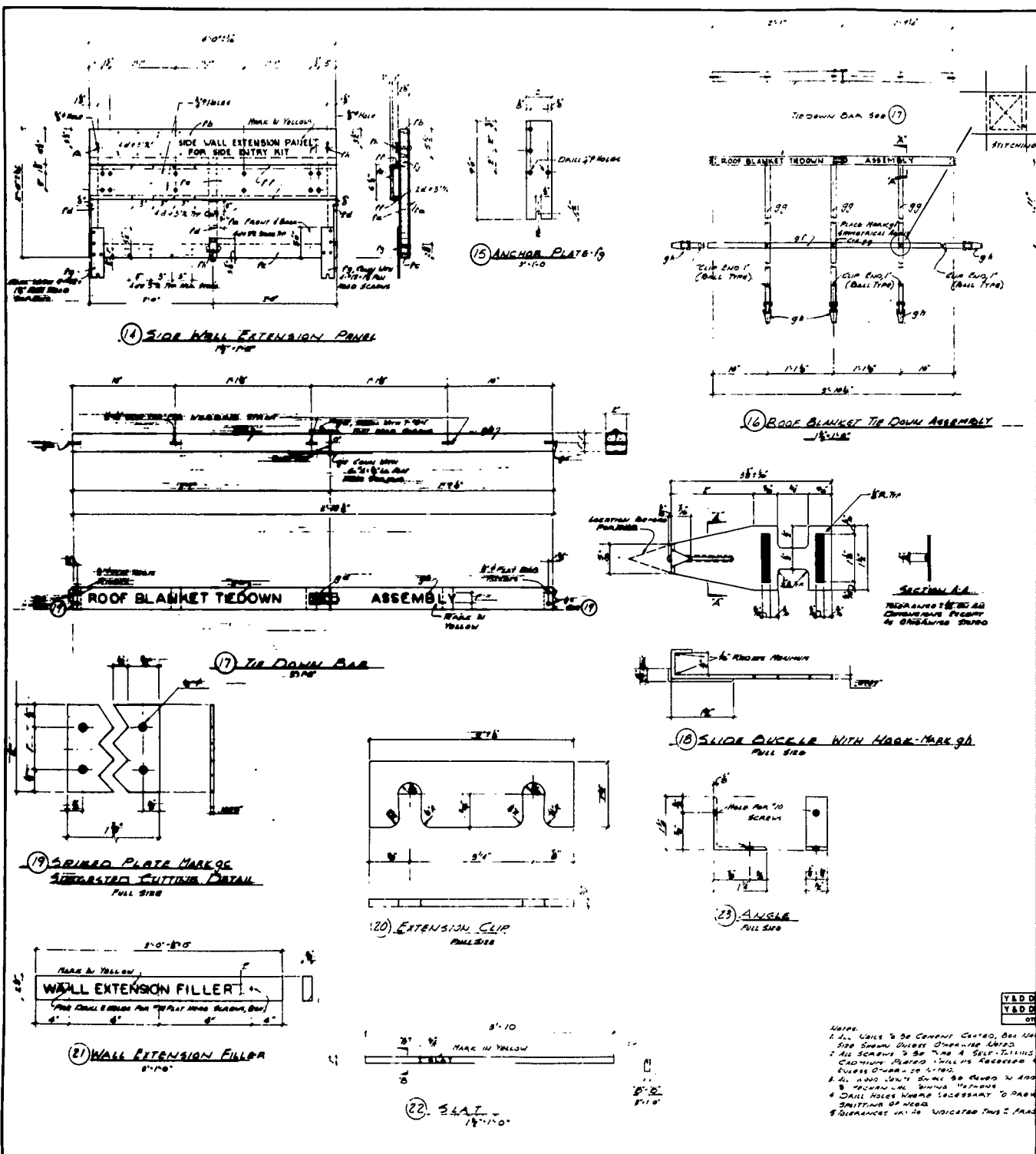


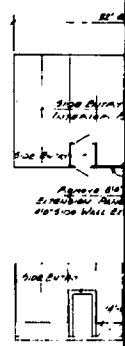
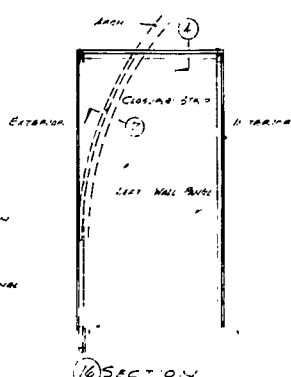
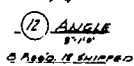
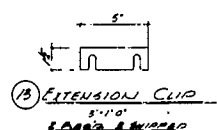
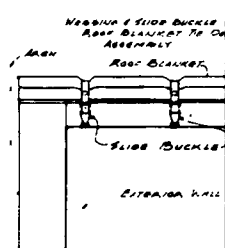
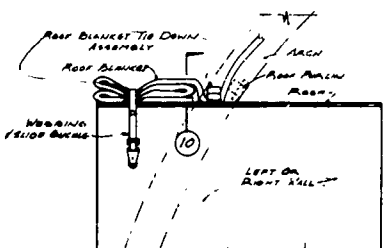
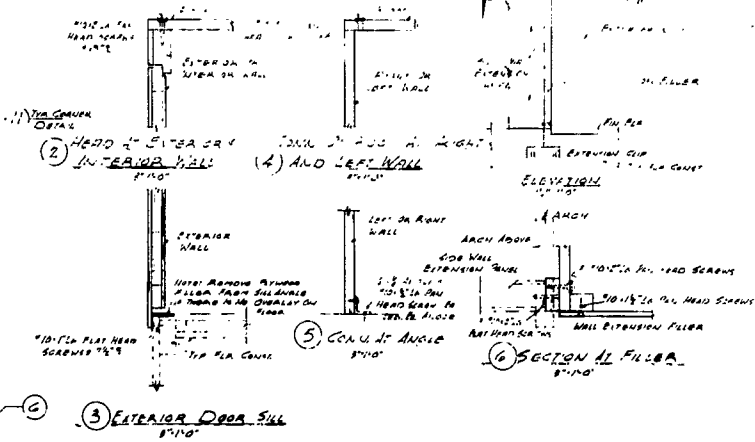
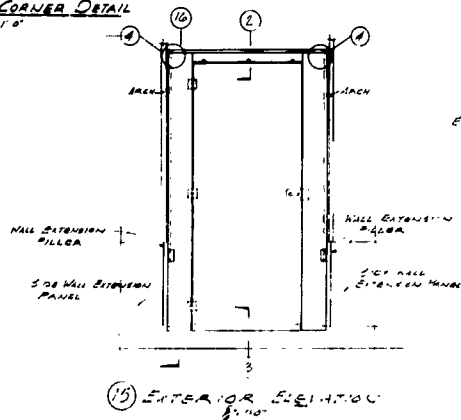
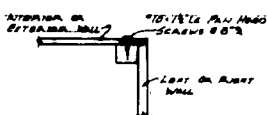
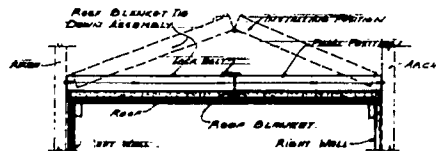
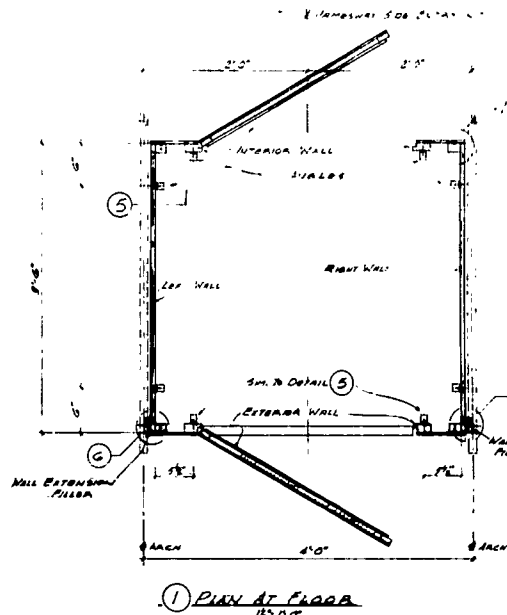
REFER TO SPEC. FOR ADDITIONAL INFORMATION AND SPECIFICATION

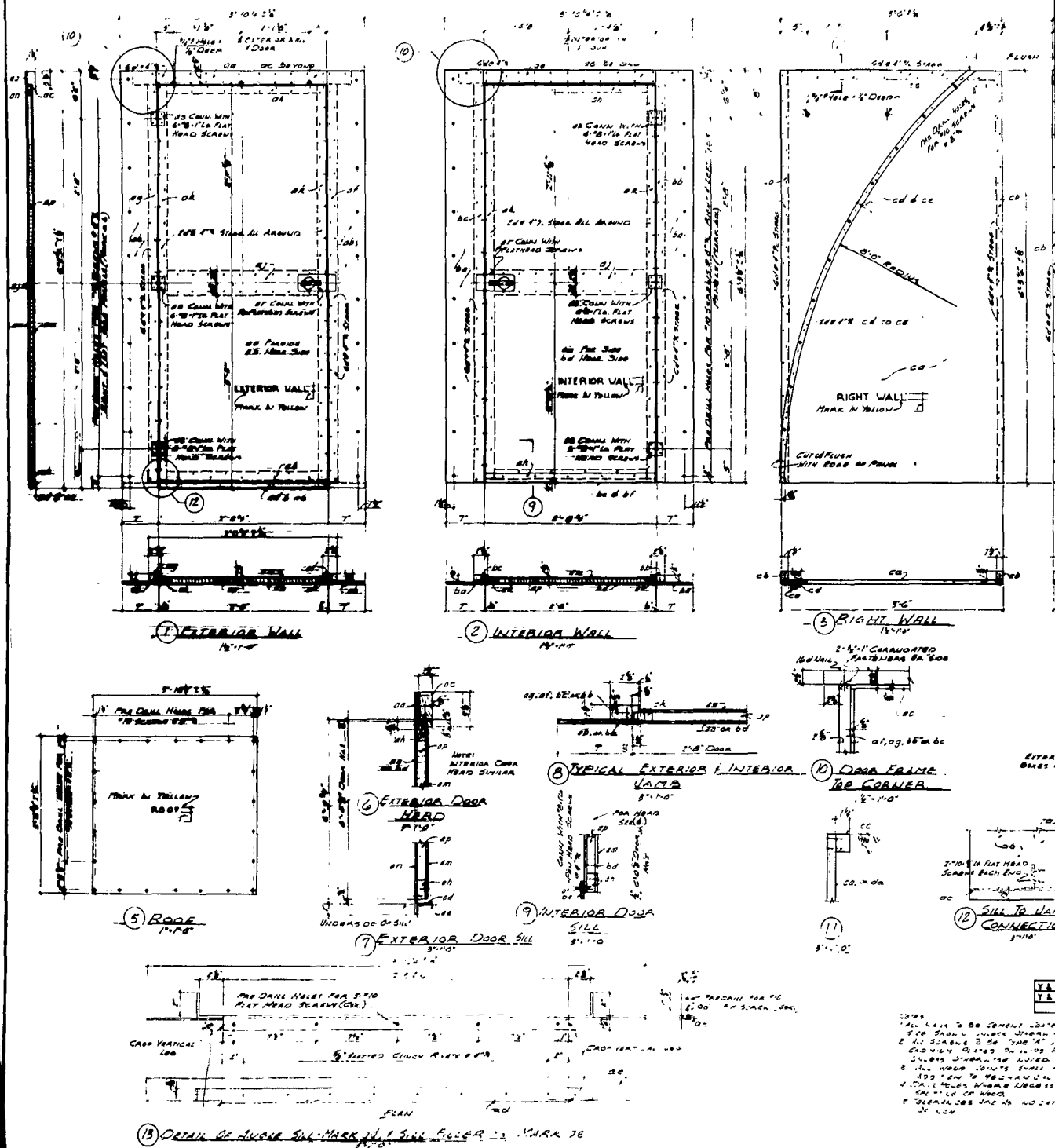
GRAPHIC SCALE
1" = 10'

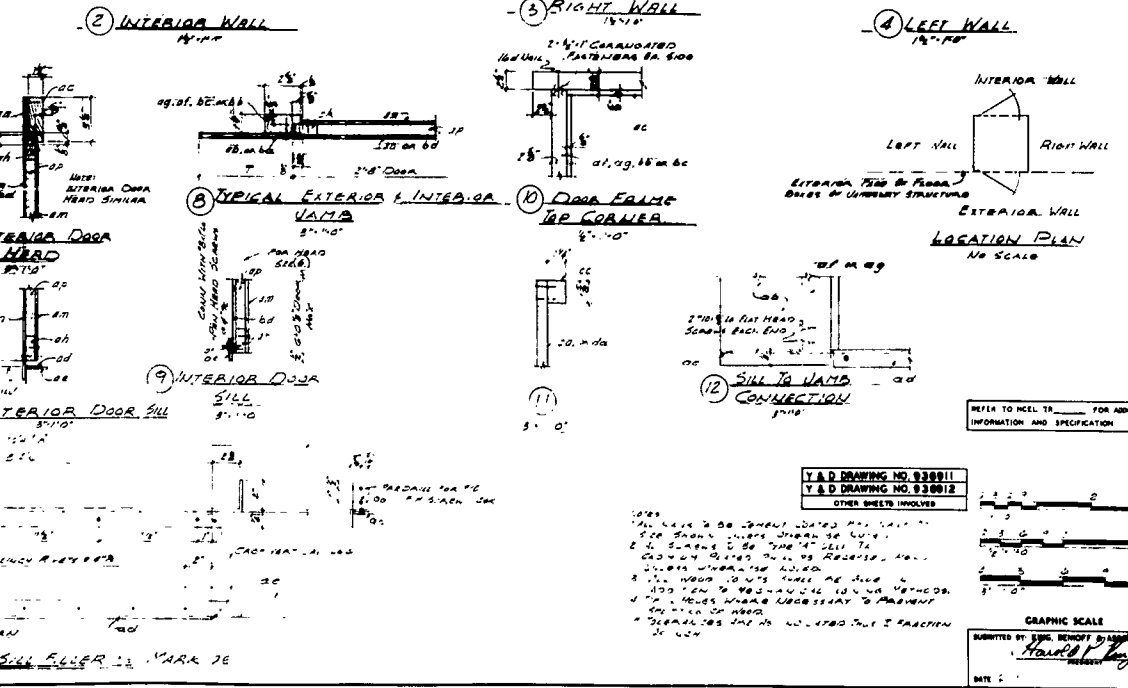
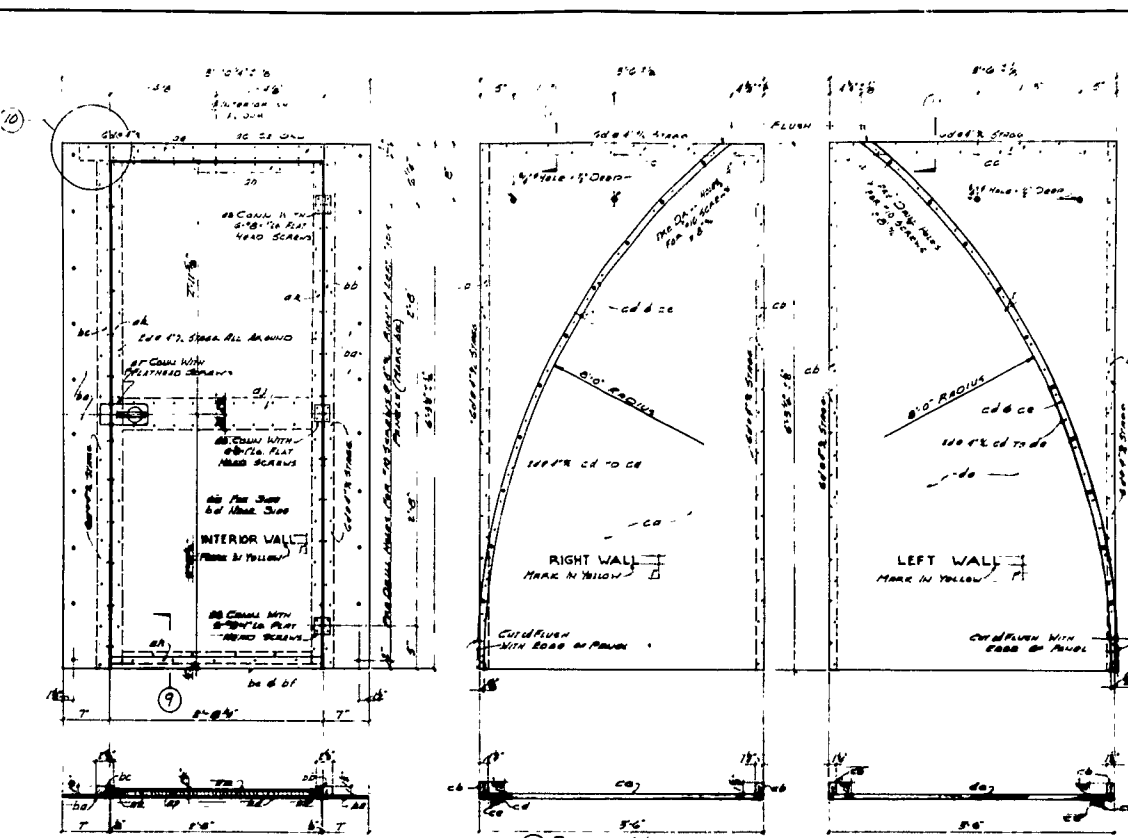
APPROVED BY: [Signature]
DATE: 12-15-61

DEPARTMENT OF THE NAVY
U.S. NAVAL CIVIL ENGINEERING LABORATORY
KING, BENNETT & ASSOCIATES
PIONEER POLAR STRUCTURES
JAMESWAY SIDE ENTRY KIT
(FOR USE WITH WALL EXTENSIONS)
FABRICATION DETAILS
SCALE AS NOTED SPEC.
SHEET 2 OF 10
100 DRAWING NO. 938907







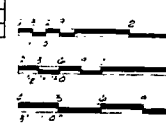


NO.	DESCRIPTION	QTY	UNIT	REMARKS
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2	8'0" RADIUS	1	PIECE	WOOD
3	8'0" RADIUS	1	PIECE	WOOD
4	8'0" RADIUS	1	PIECE	WOOD
5	8'0" RADIUS	1	PIECE	WOOD
6	8'0" RADIUS	1	PIECE	WOOD
7	8'0" RADIUS	1	PIECE	WOOD
8	8'0" RADIUS	1	PIECE	WOOD
9	8'0" RADIUS	1	PIECE	WOOD
10	8'0" RADIUS	1	PIECE	WOOD
11	8'0" RADIUS	1	PIECE	WOOD
12	8'0" RADIUS	1	PIECE	WOOD
13	8'0" RADIUS	1	PIECE	WOOD
14	8'0" RADIUS	1	PIECE	WOOD
15	8'0" RADIUS	1	PIECE	WOOD
16	8'0" RADIUS	1	PIECE	WOOD
17	8'0" RADIUS	1	PIECE	WOOD
18	8'0" RADIUS	1	PIECE	WOOD
19	8'0" RADIUS	1	PIECE	WOOD
20	8'0" RADIUS	1	PIECE	WOOD
21	8'0" RADIUS	1	PIECE	WOOD
22	8'0" RADIUS	1	PIECE	WOOD
23	8'0" RADIUS	1	PIECE	WOOD
24	8'0" RADIUS	1	PIECE	WOOD
25	8'0" RADIUS	1	PIECE	WOOD
26	8'0" RADIUS	1	PIECE	WOOD
27	8'0" RADIUS	1	PIECE	WOOD
28	8'0" RADIUS	1	PIECE	WOOD
29	8'0" RADIUS	1	PIECE	WOOD
30	8'0" RADIUS	1	PIECE	WOOD
31	8'0" RADIUS	1	PIECE	WOOD
32	8'0" RADIUS	1	PIECE	WOOD
33	8'0" RADIUS	1	PIECE	WOOD
34	8'0" RADIUS	1	PIECE	WOOD
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39	8'0" RADIUS	1	PIECE	WOOD
40	8'0" RADIUS	1	PIECE	WOOD
41	8'0" RADIUS	1	PIECE	WOOD
42	8'0" RADIUS	1	PIECE	WOOD
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44	8'0" RADIUS	1	PIECE	WOOD
45	8'0" RADIUS	1	PIECE	WOOD
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47	8'0" RADIUS	1	PIECE	WOOD
48	8'0" RADIUS	1	PIECE	WOOD
49	8'0" RADIUS	1	PIECE	WOOD
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58	8'0" RADIUS	1	PIECE	WOOD
59	8'0" RADIUS	1	PIECE	WOOD
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61	8'0" RADIUS	1	PIECE	WOOD
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65	8'0" RADIUS	1	PIECE	WOOD
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67	8'0" RADIUS	1	PIECE	WOOD
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85	8'0" RADIUS	1	PIECE	WOOD
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94	8'0" RADIUS	1	PIECE	WOOD
95	8'0" RADIUS	1	PIECE	WOOD
96	8'0" RADIUS	1	PIECE	WOOD
97	8'0" RADIUS	1	PIECE	WOOD
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99	8'0" RADIUS	1	PIECE	WOOD
100	8'0" RADIUS	1	PIECE	WOOD



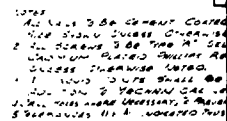
Y & D DRAWING NO. 938911
Y & D DRAWING NO. 938912
OTHER SHEETS INVOLVED

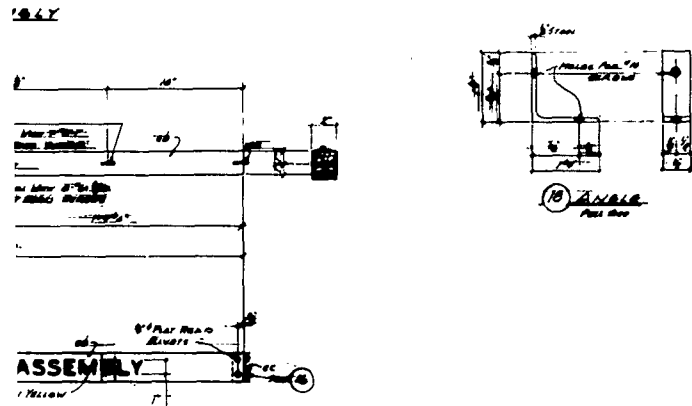
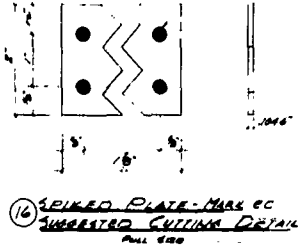
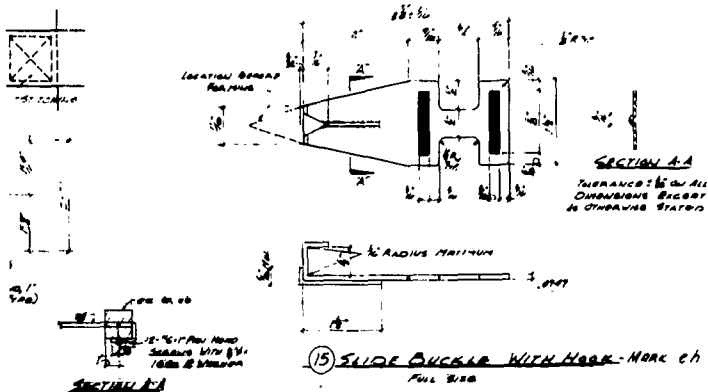
REFER TO INCL. TR. FOR ADDITIONAL INFORMATION AND SPECIFICATION



GRAPHIC SCALE
SUBMITTED BY KING, BENIOFF & ASSOCIATES
DATE: 10/1/68

DEPARTMENT OF THE NAVY		U.S. NAVAL CIVIL ENGINEERING LABORATORY	
KING, BENIOFF & ASSOCIATES		PIONEER POLAR STRUCTURES JAMESWAY SIDE ENTRY KIT (FOR USE WITH STANDARD UNIT) FABRICATION DETAILS	
DATE: 10/1/68		SCALE: AS NOTED ON SHEET	
APPROVED BY: [Signature]		DATE: 10/1/68	
FOR CHIEF OF BUREAU		Y & D DRAWING NO. 938910	





2

ITEM	DESCRIPTION	QTY	UNIT	REMARKS
1	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
2	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
3	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
4	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
5	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
6	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
7	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
8	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
9	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
10	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
11	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
12	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
13	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)

ITEM	DESCRIPTION	QTY	UNIT	REMARKS
1	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
2	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
3	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
4	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
5	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
6	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
7	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
8	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
9	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
10	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
11	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
12	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)
13	1000 1/2" DIA. STEEL	1	PIECE	SEE DET. (C)

U.S. NAVAL CIVIL ENGINEERING LABORATORY

PIONEER POLAR STRUCTURES
JAMESWAY SIDE ENTRY KIT
(FOR USE WITH STANDARD UNIT)
FABRICATION DETAILS

REVISIONS

DATE: 10/10/50

BY: [Signature]

FOR: [Signature]

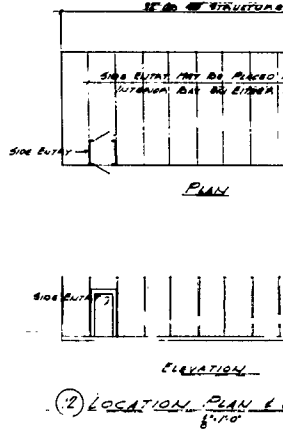
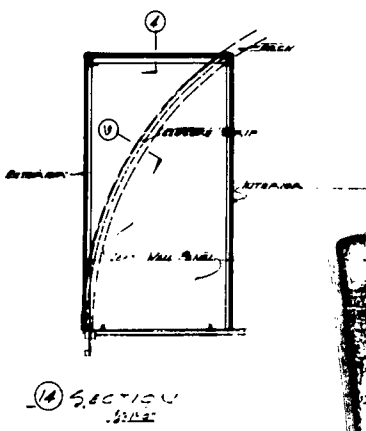
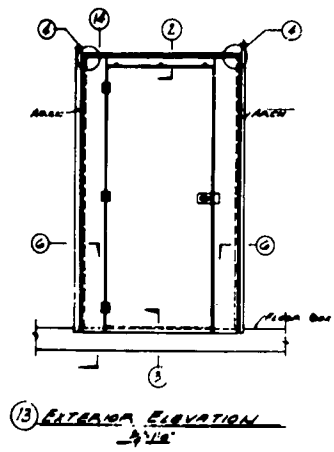
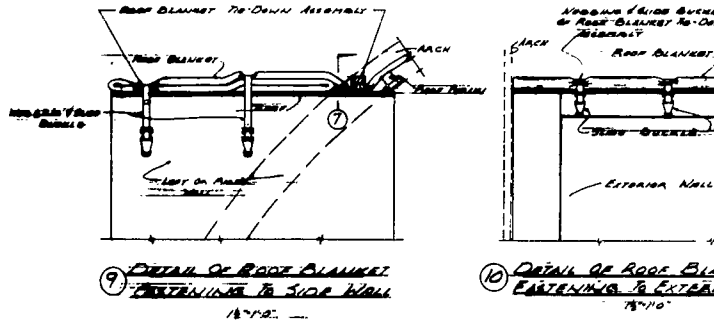
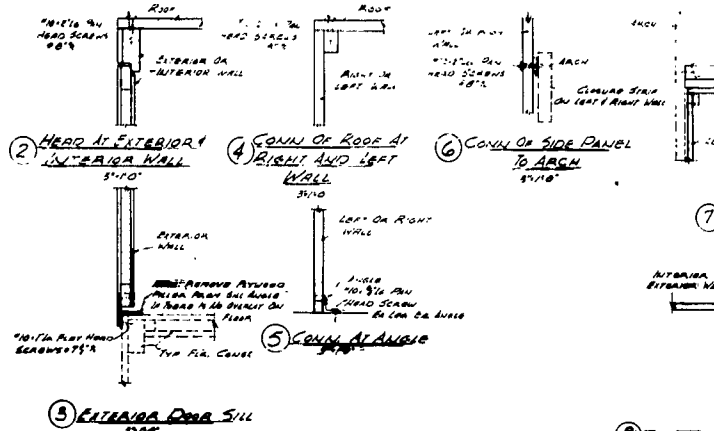
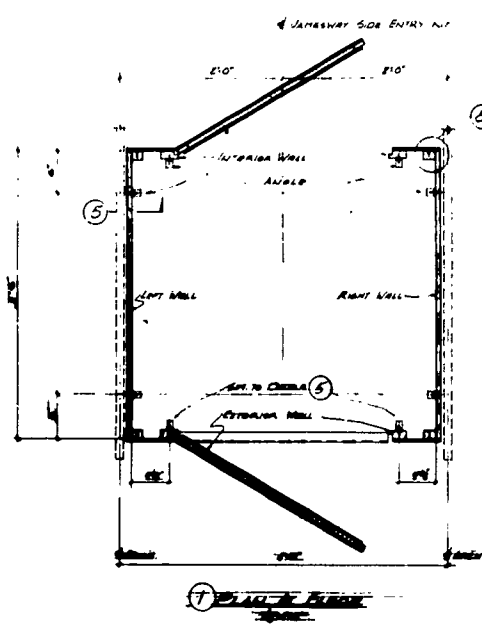
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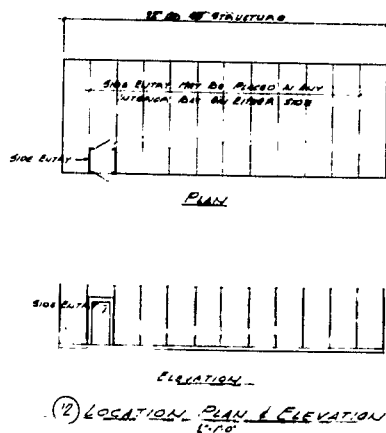
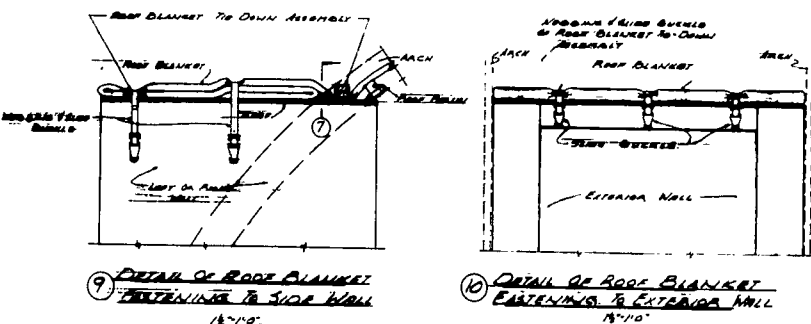
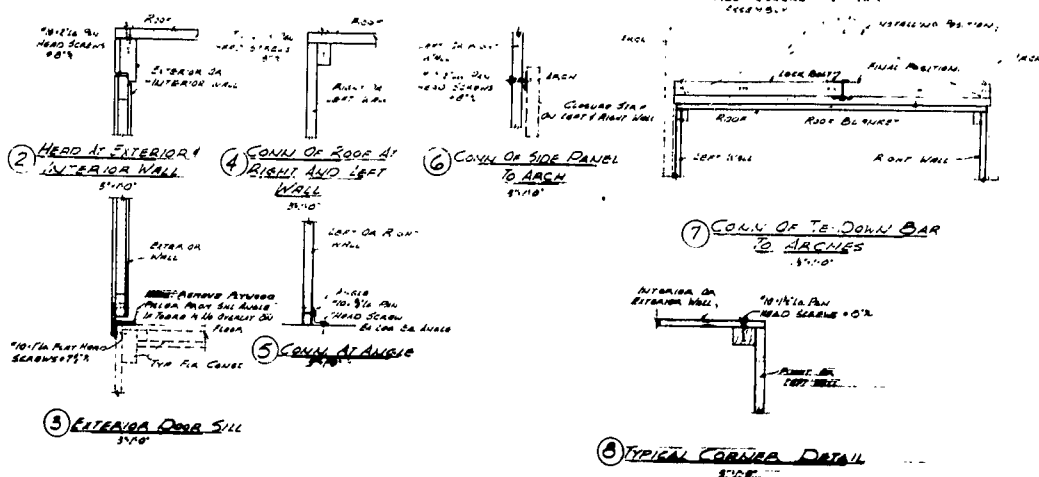
FIG. 10 OF 10

U.S. NAVAL CIVIL ENGINEERING LABORATORY

U.S. NAVAL CIVIL ENGINEERING LABORATORY

U.S. NAVAL CIVIL ENGINEERING LABORATORY





REFER TO NCCL TR. FOR ADDITIONAL INFORMATION AND SPECIFICATION



Y.S.D. DRAWING NO. 030010
Y.S.D. DRAWING NO. 030011
OTHER SHEETS INVOLVED

NO.	DESCRIPTION	UNIT	QUANTITY
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4	1/2" X 4" X 8" PLATE	EA	1
5	1/2" X 4" X 8" PLATE	EA	1
6	1/2" X 4" X 8" PLATE	EA	1
7	1/2" X 4" X 8" PLATE	EA	1
8	1/2" X 4" X 8" PLATE	EA	1
9	1/2" X 4" X 8" PLATE	EA	1
10	1/2" X 4" X 8" PLATE	EA	1
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17	1/2" X 4" X 8" PLATE	EA	1
18	1/2" X 4" X 8" PLATE	EA	1
19	1/2" X 4" X 8" PLATE	EA	1
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21	1/2" X 4" X 8" PLATE	EA	1
22	1/2" X 4" X 8" PLATE	EA	1
23	1/2" X 4" X 8" PLATE	EA	1
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66	1/2" X 4" X 8" PLATE	EA	1
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98	1/2" X 4" X 8" PLATE	EA	1
99	1/2" X 4" X 8" PLATE	EA	1
100	1/2" X 4" X 8" PLATE	EA	1

U.S. NAVAL CIVIL ENGINEERING LABORATORY

KING, BENOFF & ASSOCIATES

PIONEER POLAR STRUCTURES

JAMESWAY SIDE ENTRY KIT

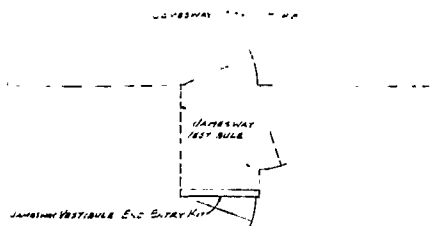
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ERECTION DETAILS

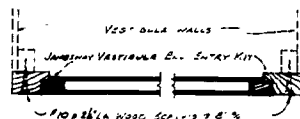
DATE: 11/10/60

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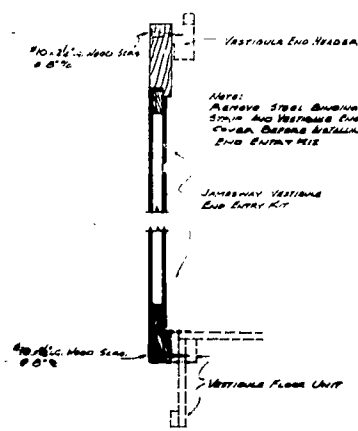
Y.S.D. DRAWING NO. 030012



LOCATION PLAN
NO SCALE



PLAN SECTION
8'-0"

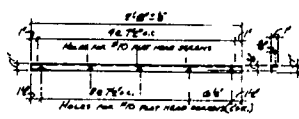


VERTICAL SECTION
8'-0"

JAMESWAY VESTIBULE END ENTRY KIT
ERECTION DETAILS

JAMESWAY VESTIBULE END ENTRY KIT
FABRICATION DETAILS

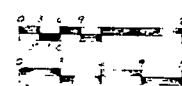
NOTES:
1. ALL WELDS TO BE CONFORM TO THE REQUIREMENTS OF THE NAVY.
2. ALL WELDS TO BE CONFORM TO THE REQUIREMENTS OF THE NAVY.
3. ALL WELDS TO BE CONFORM TO THE REQUIREMENTS OF THE NAVY.



THRESHOLD MARK 'C' (11'-6")



REFER TO HCL 19 FOR ADDITIONAL INFORMATION AND SPECIFICATION



GRAPHIC SCALE

APPROVED BY KING, BENNETT & ASSOCIATES
DATE

ITEM NO.	ITEM	QTY	UNIT	REMARKS
1	HEAD	1	PC	SEE DETAIL 1
2	WALL	1	PC	SEE DETAIL 2
3	WALL	1	PC	SEE DETAIL 3
4	WALL	1	PC	SEE DETAIL 4
5	WALL	1	PC	SEE DETAIL 5
6	WALL	1	PC	SEE DETAIL 6
7	WALL	1	PC	SEE DETAIL 7
8	WALL	1	PC	SEE DETAIL 8
9	WALL	1	PC	SEE DETAIL 9
10	WALL	1	PC	SEE DETAIL 10
11	WALL	1	PC	SEE DETAIL 11
12	WALL	1	PC	SEE DETAIL 12
13	WALL	1	PC	SEE DETAIL 13
14	WALL	1	PC	SEE DETAIL 14

THESE DETAILS TO BE SUPPLIED BY FABRICATOR & PLACED FOR ERECTION WITH VESTIBULE END ENTRY KIT

REVISIONS

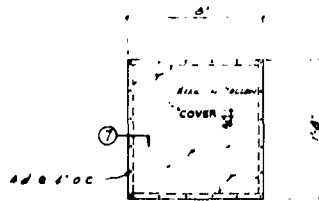
NO.	DESCRIPTION	DATE	APPROVED
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

DEPARTMENT OF THE NAVY
U.S. NAVAL CIVIL ENGINEERING LABORATORY
KING, BENNETT & ASSOCIATES
PIONEER POLAR STRUCTURES
JAMESWAY VESTIBULE END ENTRY KIT
FABRICATION & ERECTION DETAILS

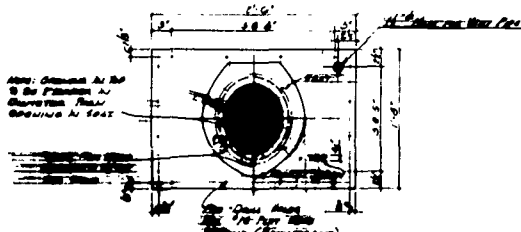
APPROVED BY KING, BENNETT & ASSOCIATES
DATE

APPROVED BY PIONEER POLAR STRUCTURES
DATE

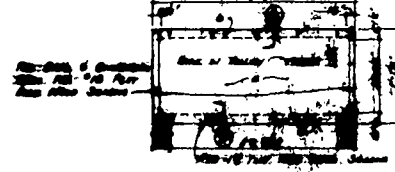
SCALE AS NOTED ON SHEET 12 OF 18
T & S DRAWING NO. 030013



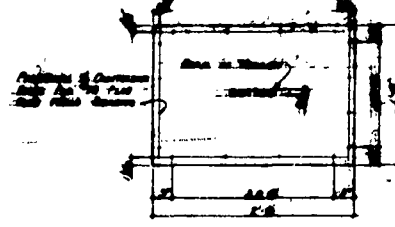
① COVER
1' 0" x 1' 0"



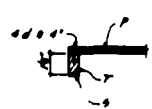
② TOP
1' 0" x 1' 0"



③ FRONT
1' 0" x 1' 0"



④ END
1' 0" x 1' 0"



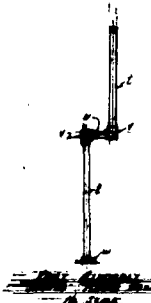
⑤ 1/2" x 1' 0"



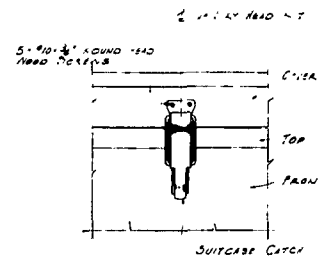
⑥ 1/2" x 1' 0"



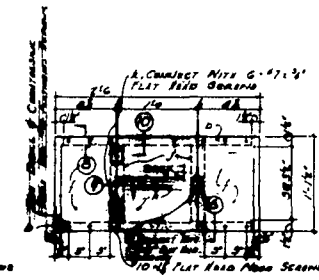
⑦ 1/2" x 1' 0"



⑧ 1/2" x 1' 0"



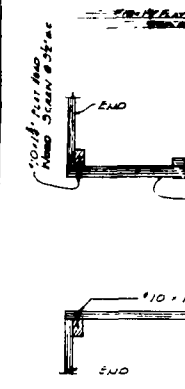
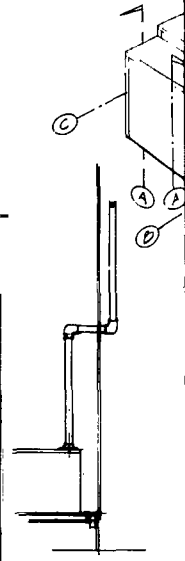
⑨ COVER LATCH CONNECTION
1' 0" x 1' 0"



⑩ 1/2" x 1' 0"

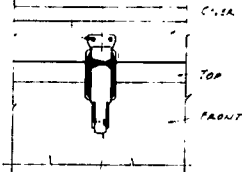
DRY HAND KIT
FABRICATION DETAILS

NOTE:
1. ALL LIDS TO BE 1/2" THICK GALV. UNLESS OTHERWISE NOTED.
2. ALL SCREWS TO BE TYPE 1/2" 4-40 TURNING ALUMINUM PLATED PHILLIPS REQUIRED HAND UNLESS OTHERWISE NOTED.
3. ALL RODS MUST BE SLIDED 1/2" TO 1" TO PREVENT JOINTS FROM MOVING.
4. DALL HOLES WERE NECESSARY TO PREVENT SPILLING OF ROADS.
5. DIMENSIONS ARE AS NOTED THIS IS FACTOR OF 1/2"

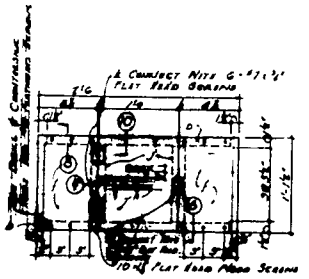


DRY HAND
FABRICATION

5" x 10" x 1/4" AROUND HEAD
WOOD SCREWS

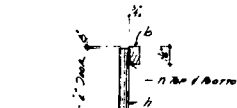


(D) COVER LATCH CONNECTION
REF. 3122



(3) DRY HEAD KIT
FABRICATION DETAILS

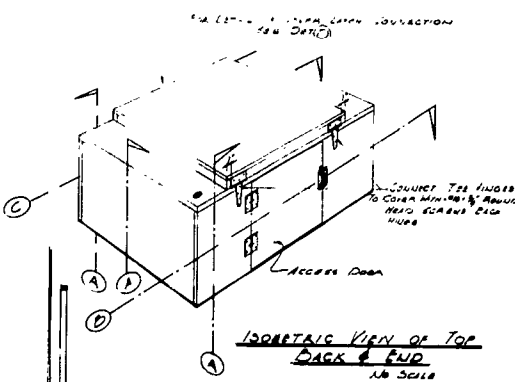
DRY HEAD KIT
FABRICATION DETAILS



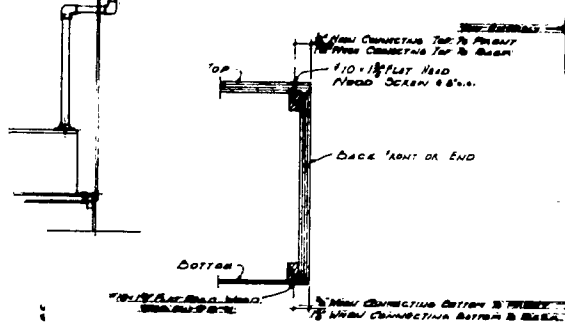
(9) 3" x 10"

(10) 3" x 10"

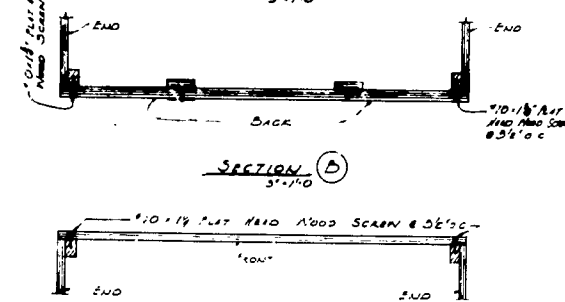
NOTE:
1. ALL TO BE THIN COATED UNLESS OTHERWISE NOTED
2. ALL SCREWS TO BE TYPE "A" 4" TAPPING UNLESS NOTED OTHERWISE
3. ALL SCREWS TO BE TYPE "A" 4" TAPPING UNLESS NOTED OTHERWISE
4. ALL SCREWS TO BE TYPE "A" 4" TAPPING UNLESS NOTED OTHERWISE
5. ALL SCREWS TO BE TYPE "A" 4" TAPPING UNLESS NOTED OTHERWISE
6. ALL SCREWS TO BE TYPE "A" 4" TAPPING UNLESS NOTED OTHERWISE
7. ALL SCREWS TO BE TYPE "A" 4" TAPPING UNLESS NOTED OTHERWISE
8. ALL SCREWS TO BE TYPE "A" 4" TAPPING UNLESS NOTED OTHERWISE
9. ALL SCREWS TO BE TYPE "A" 4" TAPPING UNLESS NOTED OTHERWISE
10. ALL SCREWS TO BE TYPE "A" 4" TAPPING UNLESS NOTED OTHERWISE



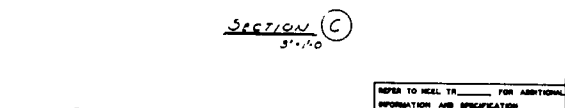
ISOMETRIC VIEW OF TOP
BACK & END
NO SCALE



SECTION A
3" x 10"



SECTION B
3" x 10"



SECTION C
3" x 10"

DRY HEAD KIT
ERECTOR DETAILS



BILL OF MATERIAL

ITEM	MARK	QTY	SIZE	UNIT	REMARKS
1	A	1	1/2" x 1/2" x 1/2"	WOOD	1
2	B	1	1/2" x 1/2" x 1/2"	WOOD	2
3	C	1	1/2" x 1/2" x 1/2"	WOOD	3
4	D	1	1/2" x 1/2" x 1/2"	WOOD	4
5	E	1	1/2" x 1/2" x 1/2"	WOOD	5
6	F	1	1/2" x 1/2" x 1/2"	WOOD	6
7	G	1	1/2" x 1/2" x 1/2"	WOOD	7
8	H	1	1/2" x 1/2" x 1/2"	WOOD	8
9	I	1	1/2" x 1/2" x 1/2"	WOOD	9
10	J	1	1/2" x 1/2" x 1/2"	WOOD	10
11	K	1	1/2" x 1/2" x 1/2"	WOOD	11
12	L	1	1/2" x 1/2" x 1/2"	WOOD	12
13	M	1	1/2" x 1/2" x 1/2"	WOOD	13
14	N	1	1/2" x 1/2" x 1/2"	WOOD	14
15	O	1	1/2" x 1/2" x 1/2"	WOOD	15
16	P	1	1/2" x 1/2" x 1/2"	WOOD	16
17	Q	1	1/2" x 1/2" x 1/2"	WOOD	17
18	R	1	1/2" x 1/2" x 1/2"	WOOD	18
19	S	1	1/2" x 1/2" x 1/2"	WOOD	19
20	T	1	1/2" x 1/2" x 1/2"	WOOD	20
21	U	1	1/2" x 1/2" x 1/2"	WOOD	21
22	V	1	1/2" x 1/2" x 1/2"	WOOD	22
23	W	1	1/2" x 1/2" x 1/2"	WOOD	23
24	X	1	1/2" x 1/2" x 1/2"	WOOD	24
25	Y	1	1/2" x 1/2" x 1/2"	WOOD	25
26	Z	1	1/2" x 1/2" x 1/2"	WOOD	26
27	AA	1	1/2" x 1/2" x 1/2"	WOOD	27
28	AB	1	1/2" x 1/2" x 1/2"	WOOD	28
29	AC	1	1/2" x 1/2" x 1/2"	WOOD	29
30	AD	1	1/2" x 1/2" x 1/2"	WOOD	30
31	AE	1	1/2" x 1/2" x 1/2"	WOOD	31
32	AF	1	1/2" x 1/2" x 1/2"	WOOD	32
33	AG	1	1/2" x 1/2" x 1/2"	WOOD	33
34	AH	1	1/2" x 1/2" x 1/2"	WOOD	34
35	AI	1	1/2" x 1/2" x 1/2"	WOOD	35
36	AJ	1	1/2" x 1/2" x 1/2"	WOOD	36
37	AK	1	1/2" x 1/2" x 1/2"	WOOD	37
38	AL	1	1/2" x 1/2" x 1/2"	WOOD	38
39	AM	1	1/2" x 1/2" x 1/2"	WOOD	39
40	AN	1	1/2" x 1/2" x 1/2"	WOOD	40
41	AO	1	1/2" x 1/2" x 1/2"	WOOD	41
42	AP	1	1/2" x 1/2" x 1/2"	WOOD	42
43	AQ	1	1/2" x 1/2" x 1/2"	WOOD	43
44	AR	1	1/2" x 1/2" x 1/2"	WOOD	44
45	AS	1	1/2" x 1/2" x 1/2"	WOOD	45
46	AT	1	1/2" x 1/2" x 1/2"	WOOD	46
47	AU	1	1/2" x 1/2" x 1/2"	WOOD	47
48	AV	1	1/2" x 1/2" x 1/2"	WOOD	48
49	AW	1	1/2" x 1/2" x 1/2"	WOOD	49
50	AX	1	1/2" x 1/2" x 1/2"	WOOD	50
51	AY	1	1/2" x 1/2" x 1/2"	WOOD	51
52	AZ	1	1/2" x 1/2" x 1/2"	WOOD	52
53	BA	1	1/2" x 1/2" x 1/2"	WOOD	53
54	BB	1	1/2" x 1/2" x 1/2"	WOOD	54
55	BC	1	1/2" x 1/2" x 1/2"	WOOD	55
56	BD	1	1/2" x 1/2" x 1/2"	WOOD	56
57	BE	1	1/2" x 1/2" x 1/2"	WOOD	57
58	BF	1	1/2" x 1/2" x 1/2"	WOOD	58
59	BG	1	1/2" x 1/2" x 1/2"	WOOD	59
60	BH	1	1/2" x 1/2" x 1/2"	WOOD	60
61	BI	1	1/2" x 1/2" x 1/2"	WOOD	61
62	BJ	1	1/2" x 1/2" x 1/2"	WOOD	62
63	BK	1	1/2" x 1/2" x 1/2"	WOOD	63
64	BL	1	1/2" x 1/2" x 1/2"	WOOD	64
65	BM	1	1/2" x 1/2" x 1/2"	WOOD	65
66	BN	1	1/2" x 1/2" x 1/2"	WOOD	66
67	BO	1	1/2" x 1/2" x 1/2"	WOOD	67
68	BP	1	1/2" x 1/2" x 1/2"	WOOD	68
69	BQ	1	1/2" x 1/2" x 1/2"	WOOD	69
70	BR	1	1/2" x 1/2" x 1/2"	WOOD	70
71	BS	1	1/2" x 1/2" x 1/2"	WOOD	71
72	BT	1	1/2" x 1/2" x 1/2"	WOOD	72
73	BU	1	1/2" x 1/2" x 1/2"	WOOD	73
74	BV	1	1/2" x 1/2" x 1/2"	WOOD	74
75	BW	1	1/2" x 1/2" x 1/2"	WOOD	75
76	BX	1	1/2" x 1/2" x 1/2"	WOOD	76
77	BY	1	1/2" x 1/2" x 1/2"	WOOD	77
78	BZ	1	1/2" x 1/2" x 1/2"	WOOD	78
79	CA	1	1/2" x 1/2" x 1/2"	WOOD	79
80	CB	1	1/2" x 1/2" x 1/2"	WOOD	80
81	CC	1	1/2" x 1/2" x 1/2"	WOOD	81
82	CD	1	1/2" x 1/2" x 1/2"	WOOD	82
83	CE	1	1/2" x 1/2" x 1/2"	WOOD	83
84	CF	1	1/2" x 1/2" x 1/2"	WOOD	84
85	CG	1	1/2" x 1/2" x 1/2"	WOOD	85
86	CH	1	1/2" x 1/2" x 1/2"	WOOD	86
87	CI	1	1/2" x 1/2" x 1/2"	WOOD	87
88	CJ	1	1/2" x 1/2" x 1/2"	WOOD	88
89	CK	1	1/2" x 1/2" x 1/2"	WOOD	89
90	CL	1	1/2" x 1/2" x 1/2"	WOOD	90
91	CM	1	1/2" x 1/2" x 1/2"	WOOD	91
92	CN	1	1/2" x 1/2" x 1/2"	WOOD	92
93	CO	1	1/2" x 1/2" x 1/2"	WOOD	93
94	CP	1	1/2" x 1/2" x 1/2"	WOOD	94
95	CQ	1	1/2" x 1/2" x 1/2"	WOOD	95
96	CR	1	1/2" x 1/2" x 1/2"	WOOD	96
97	CS	1	1/2" x 1/2" x 1/2"	WOOD	97
98	CT	1	1/2" x 1/2" x 1/2"	WOOD	98
99	CU	1	1/2" x 1/2" x 1/2"	WOOD	99
100	CV	1	1/2" x 1/2" x 1/2"	WOOD	100

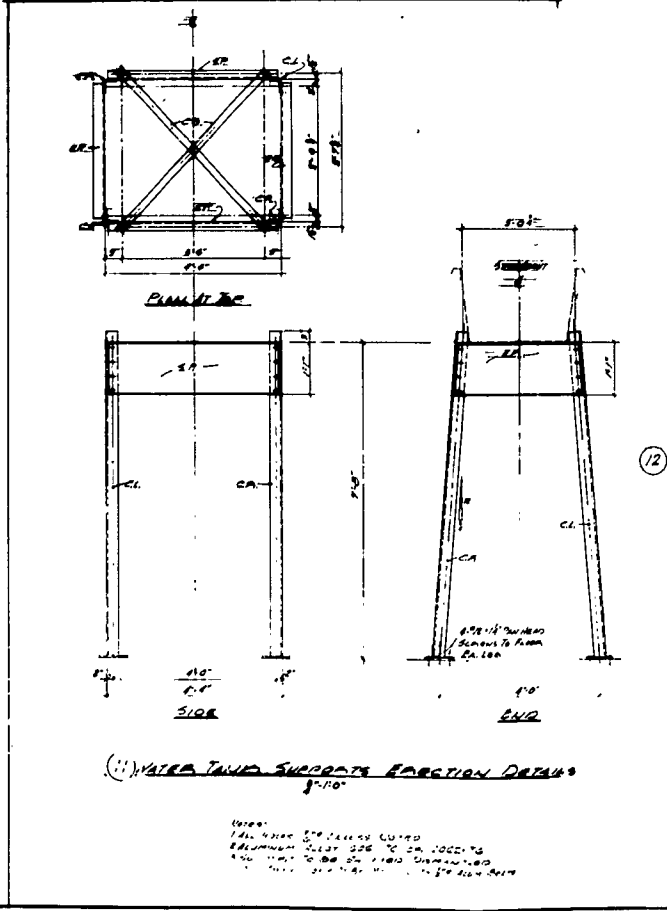
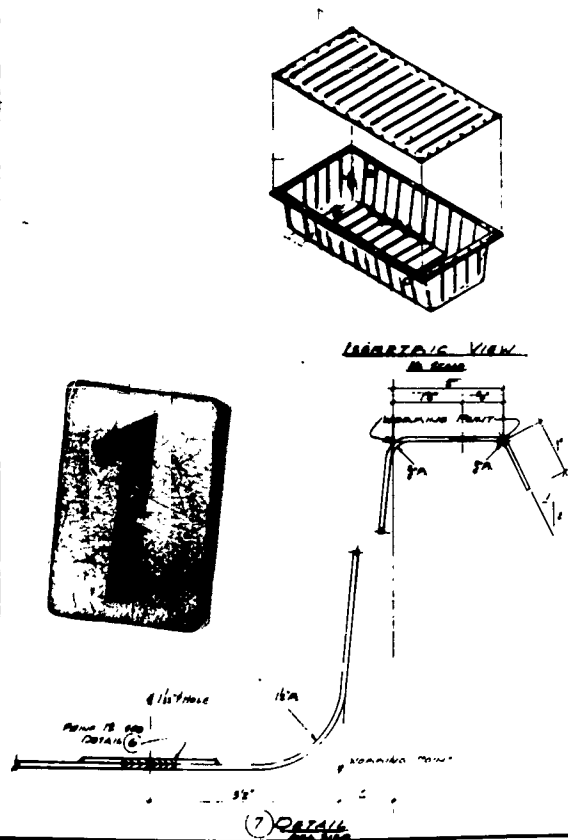
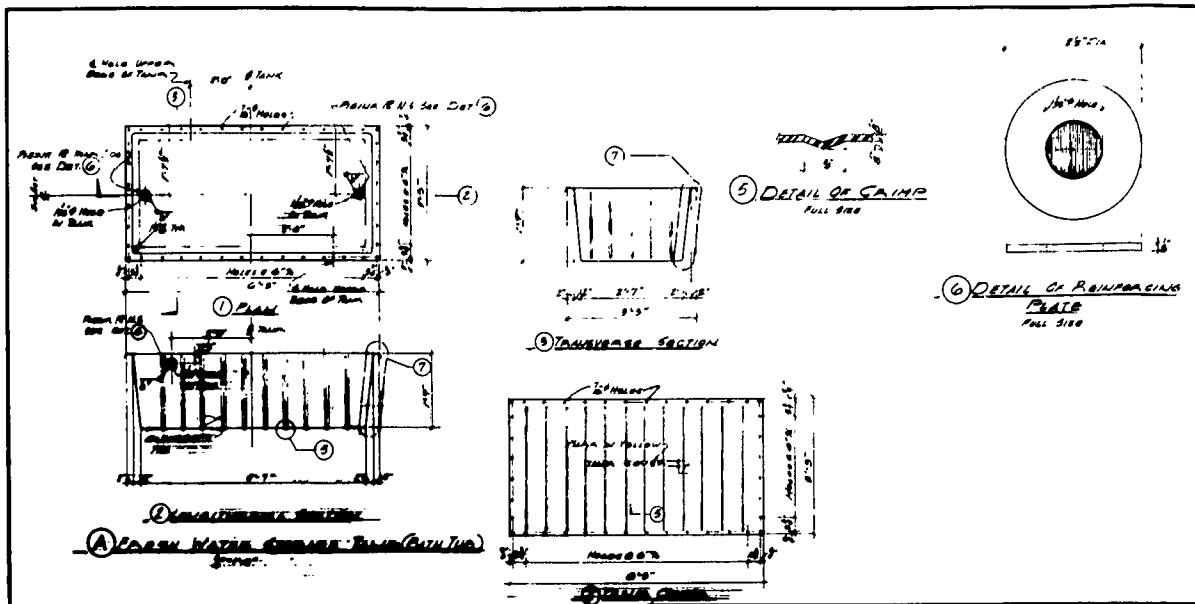
ITEM	DESCRIPTION	UNIT	REMARKS
1	TOP	EA	1
2	FRONT	EA	1
3	BACK	EA	1
4	END	EA	1
5	SUITCASE CATCH	EA	1
6	HINGE	EA	1
7	SCREW	EA	1
8	SCREW	EA	1
9	SCREW	EA	1
10	SCREW	EA	1
11	SCREW	EA	1
12	SCREW	EA	1
13	SCREW	EA	1

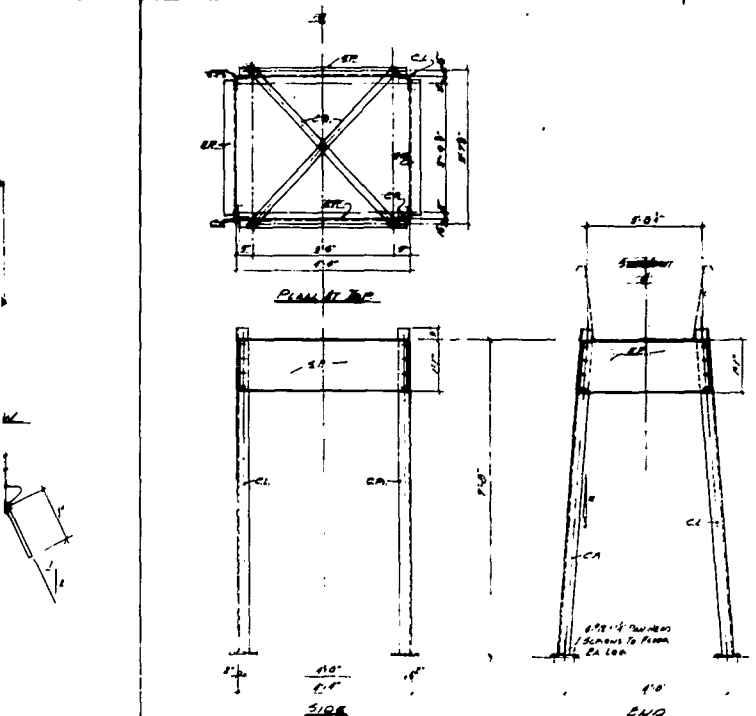
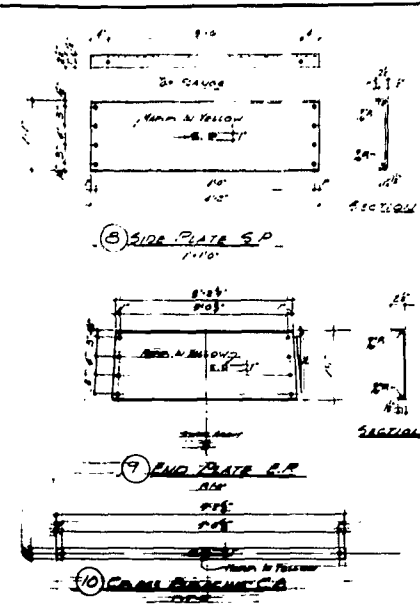
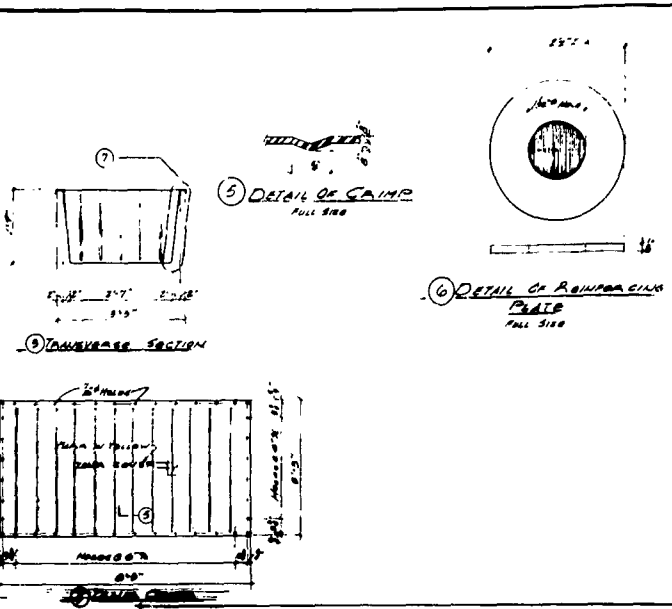
ITEM	DESCRIPTION	UNIT	REMARKS
1	TOP	EA	1
2	FRONT	EA	1
3	BACK	EA	1
4	END	EA	1
5	SUITCASE CATCH	EA	1
6	HINGE	EA	1
7	SCREW	EA	1
8	SCREW	EA	1
9	SCREW	EA	1
10	SCREW	EA	1
11	SCREW	EA	1
12	SCREW	EA	1
13	SCREW	EA	1

ITEM	DESCRIPTION	UNIT	REMARKS
1	TOP	EA	1
2	FRONT	EA	1
3	BACK	EA	1
4	END	EA	1
5	SUITCASE CATCH	EA	1
6	HINGE	EA	1
7	SCREW	EA	1
8	SCREW	EA	1
9	SCREW	EA	1
10	SCREW	EA	1
11	SCREW	EA	1
12	SCREW	EA	1
13	SCREW	EA	1

ITEM	DESCRIPTION	UNIT	REMARKS
1	TOP	EA	1
2	FRONT	EA	1
3	BACK	EA	1
4	END	EA	1
5	SUITCASE CATCH	EA	1
6	HINGE	EA	1
7	SCREW	EA	1
8	SCREW	EA	1
9	SCREW	EA	1
10	SCREW	EA	1
11	SCREW	EA	1
12	SCREW	EA	1
13	SCREW	EA	1

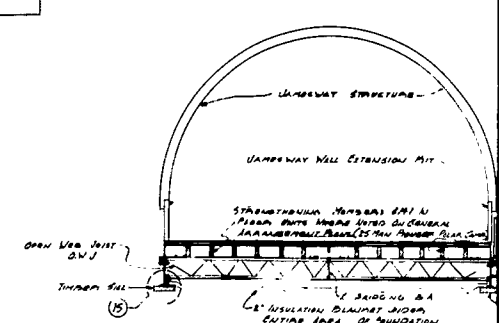
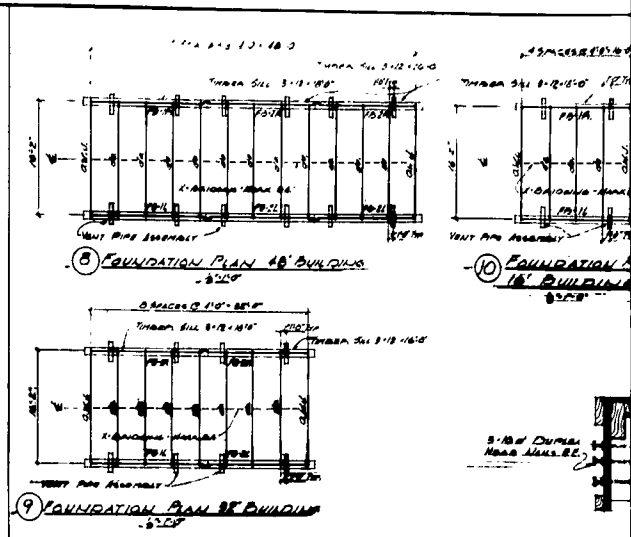
ITEM	DESCRIPTION	UNIT	REMARKS
1	TOP	EA	1
2	FRONT	EA	1
3	BACK	EA	1
4	END	EA	1
5	SUITCASE CATCH	EA	1
6	HINGE	EA	1
7	SCREW	EA	1
8	SCREW	EA	1
9	SCREW	EA	1
10	SCREW	EA	1
11	SCREW	EA	1
12	SCREW	EA	1
13	SCREW	EA	1





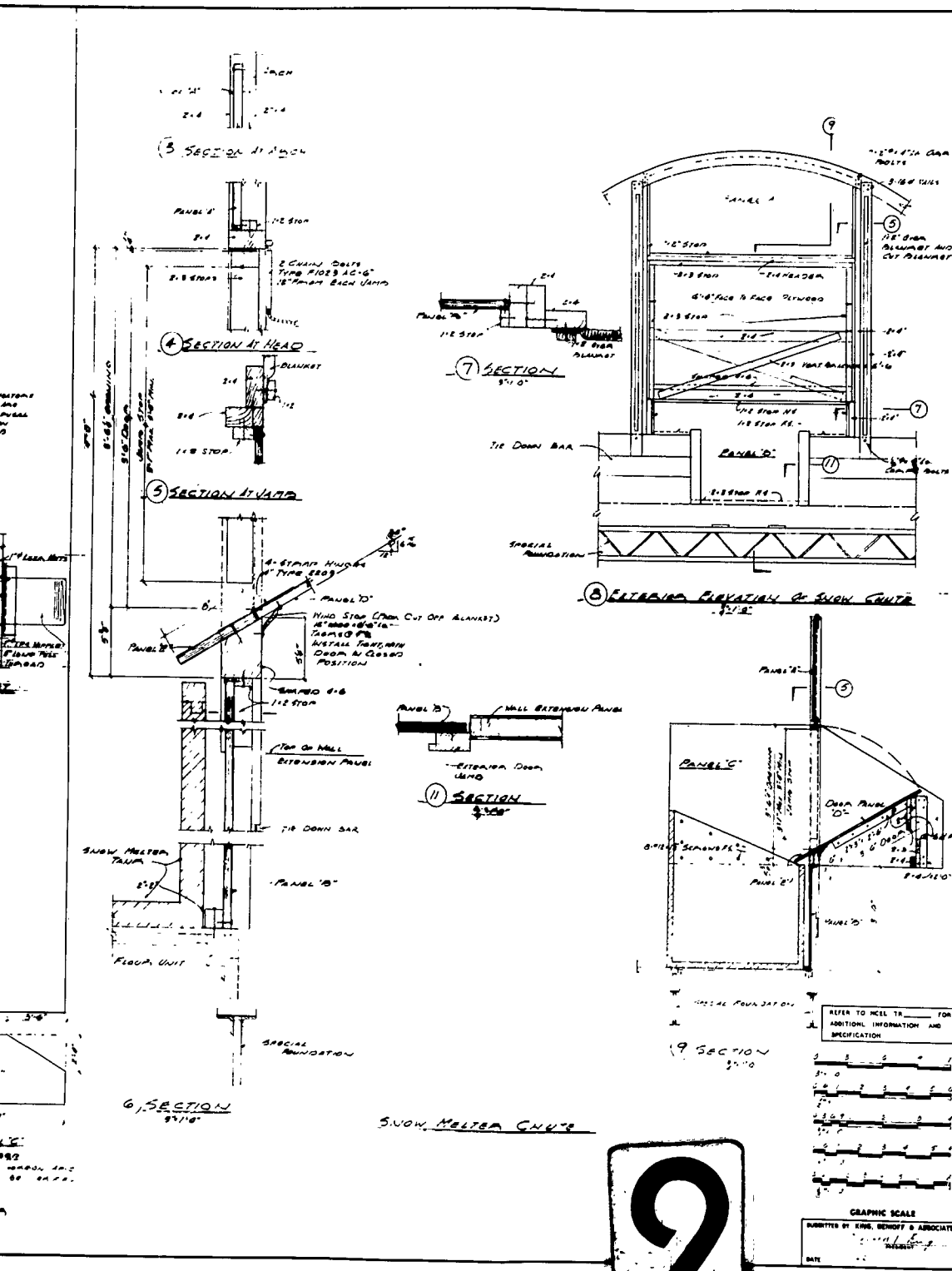
FABRICATION DETAILS

B. J. V. 12									
NO.	DATE	BY	CHKD	APPD	REVISIONS				
1	1/10/50	J. B. V.			SEE DET. 5				
2	1/10/50	J. B. V.			SEE DET. 6				
3	1/10/50	J. B. V.			SEE DET. 7				
4	1/10/50	J. B. V.			SEE DET. 8				
5	1/10/50	J. B. V.			SEE DET. 9				
6	1/10/50	J. B. V.			SEE DET. 10				
7	1/10/50	J. B. V.			SEE DET. 11				
8	1/10/50	J. B. V.			SEE DET. 12				
9	1/10/50	J. B. V.			SEE DET. 13				
10	1/10/50	J. B. V.			SEE DET. 14				
11	1/10/50	J. B. V.			SEE DET. 15				
12	1/10/50	J. B. V.			SEE DET. 16				
13	1/10/50	J. B. V.			SEE DET. 17				
14	1/10/50	J. B. V.			SEE DET. 18				
15	1/10/50	J. B. V.			SEE DET. 19				
16	1/10/50	J. B. V.			SEE DET. 20				
17	1/10/50	J. B. V.			SEE DET. 21				
18	1/10/50	J. B. V.			SEE DET. 22				
19	1/10/50	J. B. V.			SEE DET. 23				
20	1/10/50	J. B. V.			SEE DET. 24				
21	1/10/50	J. B. V.			SEE DET. 25				
22	1/10/50	J. B. V.			SEE DET. 26				
23	1/10/50	J. B. V.			SEE DET. 27				
24	1/10/50	J. B. V.			SEE DET. 28				
25	1/10/50	J. B. V.			SEE DET. 29				
26	1/10/50	J. B. V.			SEE DET. 30				
27	1/10/50	J. B. V.			SEE DET. 31				
28	1/10/50	J. B. V.			SEE DET. 32				
29	1/10/50	J. B. V.			SEE DET. 33				
30	1/10/50	J. B. V.			SEE DET. 34				
31	1/10/50	J. B. V.			SEE DET. 35				
32	1/10/50	J. B. V.			SEE DET. 36				
33	1/10/50	J. B. V.			SEE DET. 37				
34	1/10/50	J. B. V.			SEE DET. 38				
35	1/10/50	J. B. V.			SEE DET. 39				
36	1/10/50	J. B. V.			SEE DET. 40				
37	1/10/50	J. B. V.			SEE DET. 41				
38	1/10/50	J. B. V.			SEE DET. 42				
39	1/10/50	J. B. V.			SEE DET. 43				
40	1/10/50	J. B. V.			SEE DET. 44				
41	1/10/50	J. B. V.			SEE DET. 45				
42	1/10/50	J. B. V.			SEE DET. 46				
43	1/10/50	J. B. V.			SEE DET. 47				
44	1/10/50	J. B. V.			SEE DET. 48				
45	1/10/50	J. B. V.			SEE DET. 49				
46	1/10/50	J. B. V.			SEE DET. 50				
47	1/10/50	J. B. V.			SEE DET. 51				
48	1/10/50	J. B. V.			SEE DET. 52				
49	1/10/50	J. B. V.			SEE DET. 53				
50	1/10/50	J. B. V.			SEE DET. 54				
51	1/10/50	J. B. V.			SEE DET. 55				
52	1/10/50	J. B. V.			SEE DET. 56				
53	1/10/50	J. B. V.			SEE DET. 57				
54	1/10/50	J. B. V.			SEE DET. 58				
55	1/10/50	J. B. V.			SEE DET. 59				
56	1/10/50	J. B. V.			SEE DET. 60				
57	1/10/50	J. B. V.			SEE DET. 61				
58	1/10/50	J. B. V.			SEE DET. 62				
59	1/10/50	J. B. V.			SEE DET. 63				
60	1/10/50	J. B. V.			SEE DET. 64				
61	1/10/50	J. B. V.			SEE DET. 65				
62	1/10/50	J. B. V.			SEE DET. 66				
63	1/10/50	J. B. V.			SEE DET. 67				
64	1/10/50	J. B. V.			SEE DET. 68				
65	1/10/50	J. B. V.			SEE DET. 69				
66	1/10/50	J. B. V.			SEE DET. 70				
67	1/10/50	J. B. V.			SEE DET. 71				
68	1/10/50	J. B. V.			SEE DET. 72				
69	1/10/50	J. B. V.			SEE DET. 73				
70	1/10/50	J. B. V.			SEE DET. 74				
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80	1/10/50	J. B. V.			SEE DET. 84				
81	1/10/50	J. B. V.			SEE DET. 85				
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83	1/10/50	J. B. V.			SEE DET. 87				
84	1/10/50	J. B. V.			SEE DET. 88				
85	1/10/50	J. B. V.			SEE DET. 89				
86	1/10/50	J. B. V.			SEE DET. 90				
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89	1/10/50	J. B. V.			SEE DET. 93				
90	1/10/50	J. B. V.			SEE DET. 94				
91	1/10/50	J. B. V.			SEE DET. 95				
92	1/10/50	J. B. V.			SEE DET. 96				
93	1/10/50	J. B. V.			SEE DET. 97				
94	1/10/50	J. B. V.			SEE DET. 98				
95	1/10/50	J. B. V.			SEE DET. 99				
96	1/10/50	J. B. V.			SEE DET. 100				
97	1/10/50	J. B. V.			SEE DET. 101				
98	1/10/50	J. B. V.			SEE DET. 102				
99	1/10/50	J. B. V.			SEE DET. 103				
100	1/10/50	J. B. V.			SEE DET. 104				
101	1/10/50	J. B. V.			SEE DET. 105				
102	1/10/50	J. B. V.			SEE DET. 106				
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107	1/10/50	J. B. V.			SEE DET. 111				
108	1/10/50	J. B. V.			SEE DET. 112				
109	1/10/50	J. B. V.			SEE DET. 113				
110	1/10/50	J. B. V.			SEE DET. 114				
111	1/10/50	J. B. V.			SEE DET. 115				
112	1/10/50	J. B. V.			SEE DET. 116				
113	1/10/50	J. B. V.			SEE DET. 117				
114	1/10/50	J. B. V.			SEE DET. 118				
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116	1/10/50	J. B. V.			SEE DET. 120				
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127	1/10/50	J. B. V.			SEE DET. 131				
128	1/10/50	J. B. V.			SEE DET. 132				
129	1/10/50	J. B. V.			SEE DET. 133				
130	1/10/50	J. B. V.			SEE DET. 134				
131	1/10/50	J. B. V.			SEE DET. 135				
132	1/10/50	J. B. V.			SEE DET. 136				
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147	1/10/50	J. B. V.			SEE DET. 151				
148	1/10/50	J. B. V.			SEE DET. 152				
149	1/10/50	J. B. V.			SEE DET. 153				
150	1/10/50	J. B. V.			SEE DET. 154				
151	1/10/50	J. B. V.			SEE DET. 155				
152	1/10/50	J. B. V.			SEE DET. 156				
153	1/10/50	J. B. V.			SEE DET. 157				
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164	1/10/50	J. B. V.			SEE DET. 168				
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168	1/10/50	J. B. V.			SEE DET. 172				
169	1/10/50	J. B. V.			SEE DET. 173				
170	1/10/50	J. B. V.			SEE DET. 174				
171	1/10/50	J. B. V.			SEE DET. 175				
172	1/10/50	J. B. V.			SEE DET. 176				
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177	1/10/50	J. B. V.			SEE DET. 181				
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182	1/10/50	J. B. V.			SEE DET. 186				
183	1/10/50	J. B. V.			SEE DET. 187				
184	1/10/50	J. B. V.			SEE DET. 188				
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187	1/10/50	J. B. V.			SEE DET. 191				
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194	1/10/50	J. B. V.			SEE DET. 198				
195	1/10/50	J. B. V.			SEE DET. 199				
196	1/10/50	J. B. V.			SEE DET. 200				
197	1/10/50	J. B. V.			SEE DET. 201				
198	1/10/50	J. B. V.			SEE DET. 202				
199	1/10/50	J. B. V.			SEE DET. 203				
200	1/10/50	J. B. V.			SEE DET. 204				
201	1/10/50	J. B. V.			SEE DET. 205				
202	1/10/50	J. B. V.			SEE DET. 206				
20									



(14) TYPICAL CROSS SECTION WHEN
SPECIAL FOUNDATION IS USED
11'0"





NO.	REVISION	DATE	BY	APPROVED
1	AS NOTED			
2	AS NOTED			
3	AS NOTED			
4	AS NOTED			
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